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THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—14TH YEAR. SYDNEY: SATURDAY, AUGUST 6, 1927. No. 6.

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COMMON JOINT CONDITIONS.[1]

By HORACE PERN, M.R.C.S. (Eng.), L.R.C.P. (Lond.),
Lcongatha, Victoria.

I WISH to thank you for the honour you have conferred in asking me to read a paper on the first night of our new sub-division. I do consider it an honour. I wish the sub-division success. I think we all feel that in your capable hands, Mr. President, it will be a success and that you will give it the enthusiasm and ideal without which nothing can succeed.

I propose with your permission to give a paper on the everyday joint conditions we meet with in practice. I have had only eighteen days to think out this paper and not much time in that period to do so. So I hope you will deal leniently with its many imperfections.

During the war when I left the line, I went to Southall, where I saw a large number of end results of war injuries. On the trip home on the boat there were five hundred men, a great number returning owing to casualties of all types. I first investigated all the conditions, tabulated them, taught those who needed it, the proper way to use their limbs, ordered exercises and manipulated joints and muscles that required it.

At the end of the voyage I examined the patients again to check results. I learned a lot from Colonel Openshaw and had the good fortune to obtain Sir Robert Jones's book on orthopædics. I learned that if one wished to treat joints correctly, it was necessary to understand the principles he taught and to try to follow in his footsteps. Sir Robert is a craftsman of the highest order. I got these impressions: that the surgery of the war was good, frequently beautiful, but that the surgeons thought anatomically, their aim was to get good anatomical results, but they did not recognize that the joints acted mechanically and that though the limb was anatomically correct, if it was used in a mechanically wrong way, it was useless to a varying degree and that if it was used in a mechanically wrong way over a period, it became anatomically wrong.

The same thing seems to happen in everyday life, as it did at the war, especially to hospital surgeons. Surgeons do not see their end results. The orthopædic surgeon of course sees all types of conditions, but his main work is dealing with the grosser types of deformity. The man in general practice sees a limited number of patients, so he is at a disadvantage.

I may be quite wrong, but my impressions are that an appalling loss of time, a great deal of pain and disability could be saved. I will quote an example.

A friend of mine, an officer, came down to see our dentist. He was walking with a partially flexed knee on the tip of his toes. He told me he had been up to hospital again and they wished to cut his tendons. I put him on a couch and examined his knee and then told him I would hurt him for a minute or so. I steadily put the knee through its full movements; made him do the same himself; explained why he was using the leg incorrectly; why he should use it correctly; then showed him.

He had a flesh wound with a lot of scarred tissue which hurt when stretched, so the muscles were on guard and in a stage of spasm; therefore he used his limb in a position that gave him least pain. He thought he could not walk in any other position. Directly he understood the why and the wherefore, he could walk correctly.

Pathogenesis.

I will go through the pathology of joints. It may sound very elementary, but it is impossible to treat joints correctly unless you think pathologically.

In all injuries you have bruising or tearing of tissues, followed by hæmorrhage and the exudation of lymph. The process of repair is the same in all tissues: the removal of dead tissue, the establishment of acute hyperæmia with the formation of new vessels which permeate the blood clot exudate and damaged tissues, the formation of granulations and then fibrous tissue. The hyperæmia disappears and hard fibrous tissue is formed, the density of the permanent scar depending as in all tissues on whether the union is primary or delayed. The crux of the whole treatment of acute joint injuries is to get primary union with a short, thin, firm scar. If union is delayed, the scar is either long or weak or thick, with a lot of fibrous strands in the surrounding tissues, matting them up and strangling the blood supply. Cartilage has no blood vessels and probably deals with its injuries in the same way as the cornea. New blood vessels grow in from the edges, remove damaged cells, lay down new cells and then disappear. This takes about three weeks. In rheumatoid arthritis the same changes occur as in an injured joint. A layer of granulation tissæ is formed on synovial membrane which spreads over the cartilage of the articular surfaces and by adhering to granulations of the opposite side gradually obliterates the joint cavity. The granulations extend into the underlying cartilage and tend to destroy. The bone beneath resists for a time, but in time the bone marrow becomes converted into œdematous fibrous tissue with many osteoblasts. These invade the cartilage from below, causing ossification. It also causes condensation of bone and much new bone formation. Finally all joints act mechanically. If the line of forces is altered, you must get a new pull of the muscles which produces fatigue and ultimate stretching, stretching of the supports on one side and shortening on the other side, alteration of the points of pressure on the ends of the bone, with the production of pain, at first irritation of the cartilage and then rheumatoid changes. The best example of this is a bunion which is caused by abduction of the big toe and constantly wringing of it whilst walking. I will not say much about acute injuries except in general terms.

Diagnosis.

Diagnosis is greatly simplified by thinking in structures—the muscular attachments round joints, the ligamentous attachments, capsule, special structures inside joints as the semilunar cartilages in the

[1] Read at a meeting of the Victorian Branch of the British Medical Association on June 18, 1927.

knee and special ligaments as the crucial ligaments, the cartilage at the ends of the bones, the bones themselves. Also since all injuries are a matter of degree, the same force if continued will tear one structure after the other. A careful history will usually help, but it must always be remembered that the greater the pain, the greater the injury.

Treatment.

The treatment is made easier by thinking in terms of pathology. Exudate is prevented by light massage, a light stroking movement towards the body, increasing in weight when sound structures are reached. Further exudate is prevented and its absorption is helped by elasticity of firm wool pressure. The thickness of wool should be two or three complete turns of an ordinary pound packet of wool, always erring on the side of having too much wool and firm bandaging. The healing of torn structures by primary union can be achieved only by keeping the torn ends together, either by the pull of the bandage alone or aided with splints, if the injury is severe. During the process of repair the ends of the torn structure must be kept together and not torn apart until healed. If it is necessary to change the dressing, the limb should be held so that no tension is put on healing structures. The test of repair is tenderness of pressure over injured tissues; if tenderness is gone or nearly gone, it is safe to commence movement, but some support should be given to injured structures, such as strapping put in such a way as to pull the ends together, or by raising the sole of the boot in sprained ankles. The joint should then be used gradually and full mobility should be obtained in all directions. If necessary see that the joint is used in a mechanically correct manner. If you follow these directions, you will have no trouble afterwards, but they must be carried out in their entirety. The problem has been a comparatively simple one; you have followed out the pathological requirements of the wound and you have followed out the mechanical requirements of the joint.

We now come to old injuries and are faced with an entirely different problem, one which frequently taxes our skill to its limit. Some part of the foundation of our building has given away and the whole structure topples and we have laboriously to build it up.

Let us take an everyday injury, rupture of the internal lateral ligaments of the ankle joint which has been incorrectly treated, and the union is long and weak. The internal lateral support of the ankle is gone.

The weight of the body normally falls through the centre hip, slightly to the inner side of the knee joint and centre of ankle.

It is resisted by three points of the foot, the *os calcis*, the head of the first and of the fifth metatarsal bones. The weight should fall in the middle line of this triangle. Owing to the loss of lateral support the foot becomes abducted, the weight now falls on the inner side of the triangle. The tendons and ligaments first take the strain and then stretch, the astragalus twists inwards and the arch falls. You then immediately get a new train of anatomical changes. Muscles are acting at a mechanical disadvantage and lose their power, the points of pressure on the ends of bones are altered, setting up irritation which, if continued, gives rise to the usual pathological changes.

Your first line of treatment is to build up your foot so that the line of forces should fall in its proper place. Then you have to strengthen your natural supports to maintain the lateral balance of the ankle joint. That can be done only by supporting it whilst the repair is going on.

From the pathological point of view you know that you have a lot of fibrous tissue strangling the vessels. Your only hope is to increase the blood supply so that immature cells may be removed and matured ones laid down in their place. Then you have to strengthen your muscles which are directly or indirectly connected with joints. You can do that only by increasing the blood supply. That is done by exercise, so directed that in the process the muscles are not overtaxed. The exercise may be aided by hot and cold bathing which acts by dilating and contracting vessels, making them vigorous, and by massage which should be deep. Finally the limb must be reeducated to act in a mechanically correct manner. You see what a complicated process has to be gone through to rectify what was a very simple injury to treat, all through failure to recognize certain anatomical and mechanical laws. That describes the plan of campaign in treating all old injuries. Having a general line of campaign, you find out the pathological condition you wish to treat, you again think in structures. You have to decide whether the limitation is due to muscle spasm, adhesions in surrounding tissue or in joint, whether adhesions are weak and will respond to treatment, whether they are dense and treatment may make them denser, whether arthritis is present and movement will be beneficial or will light up acute mischief. The history will help you to decide these points. If the movement is limited in all directions, arthritis is probably present; if movement is free in one or more directions, obstruction is probably present in the surrounding tissues. Your sense of touch will help you to a final decision. I have no hesitation in trying to obtain full movement in any joint if I can obtain any movement at all and if it gives a feeling of elasticity, as long as the condition is not in an acute or subacute stage and the cause does not absolutely contradict it. I implicitly follow Sir Robert Jones's rules: if pain persists, stop, especially if it persists in the morning. If range of movement increases, continue. If the range of movement decreases, stop, even if pain is less. It is the duration of pain, not its intensity, which is the guide. In all manipulation only one range of full movement must be attempted; the movement should be slow and steady, not jerky. Full movement in all directions is essential; unlimited voluntary movement can do no harm.

Failure to follow out these rules to the letter of the law will lead to certain disaster. I think it is

essential in all manipulative work to have strong hands and to be complete master of them, so that you can stop immediately you wish to do so. It is also necessary to have patience and enough personality to have the orders carried out. There are four ways of carrying out the movements. The first is by the patient's voluntary movements. The patient gradually moves the limb in stages, but always moves the joint to the full possible extent. The second way is by moving joints to the full extent at one sitting under an anæsthetic; of this I have no experience. The third method is by gradually stretching with splints, the fourth by gradual manipulation. I think a word of warning should be given that if a joint is manipulated wrongly, it is ruined forever and the condition of the patient may be infinitely worse. It should not be undertaken lightly. Perhaps the best example of healing with a weak scar is rupture of the internal lateral ligament of the knee joint with or without injury to the internal semilunar cartilage. The patient complains of instability of the knee and when the semilunar cartilage has been injured, of locking of the knee, followed by synovitis. I feel confident that a great number of these patients have a thickened and bruised cartilage, not a ruptured one, and if the joint is only kept at rest it will recover. I have had some permanent cures. I order a knee cage with a lock joint to prevent 20% to 25% of full extension. The thigh collar goes well up the thigh and if much lateral rocking is present, it goes as close to the knee as possible without interfering with mobility. The cage must be worn as long as it is needed. The general supports and muscles are strengthened by exercise, full flexion and extension are allowed by cage, no lateral movement is allowed. Hot and cold bathing and massage are used. The most favourable conditions for treatment are sprains of joints involving muscular and ligamentous attachments, stiffness following dislocations and contusions of joints. About three years ago I had a good example of stiffness following prolonged immobilization.

A woman, about thirty years of age, saw me for the first time within a few days after return from the hospital, where she had been for nine months with a serious septic condition. She could not get out of a chair and could only shuffle one foot after the other with a lot of help. She could not get on the bed pan by herself. Her arms were normal, her spine, both hips, left knee and ankle were rigid, but the right knee and ankle were not quite so bad. From her history I concluded she had had no arthritic trouble and the diagnosis was stiffness probably due to immobilization. If she was left untreated it would be months before she got about; most probably she would never recover, as she thought she would never move again. I took her into hospital and manipulated all her joints, frequently utilizing my full strength. I ordered her exercises which the sister supervised and to her care a great deal of the success is due. I discharged her in one month, with full mobility of the spine and all her joints. She could put her head against the end of the bed and arch her back so that her legs could more than touch the end of bed. Since that she has never looked back and is quite a normal woman.

I am treating at present a patient with a dislocated shoulder. This is a common injury resulting in stiffness.

The patient is a badly worn man of about forty-six years. I had a lot of difficulty in reducing the dislocation, so I concluded that I had produced a good deal of trauma. I kept him at complete rest for ten days and then ordered the arm to be worn in a sling and gentle movements which he was gradually to increase. I did not see him again until about three weeks after accident. He then had what middle aged men often get: inability to raise the arm above a right angle and general stiffness of the shoulder. If left alone, the arm would probably remain in that position. I have moved his arm three times and given almost full mobility. One or two more sittings will give full mobility. Of course one could give an anæsthetic and move it at one sitting; I know he has a good deal of soft fibrous tissue and I am always afraid of tearing too much down and instead of doing good, produce more fibrous tissue.

I am treating a soldier who is a typical example of a person suffering from an injury to cartilage due to contusion of a joint. He had a bad fall on to his shoulder, his horse came down with him, the shoulder was badly bruised, but the bone was not injured. I bandaged his arm to his side and told him to keep it there for ten days and report. I met him in about a week's time and his arm was not even in a sling. I spoke to him as you do to all good diggers, when speaking for the good of their soul. He said: "My shoulder is alright." I replied: "It is your arm." He came back in a little over three weeks, complaining as all these patients do if not properly treated. He had pain in the shoulder on movements, general aching and inability to raise the arm above a right angle. On moving the arm I could feel a small rough patch which my sense of touch told me was a rough patch on one or both ends of the cartilage. If he had been suffering from an old injury, I would have had no hesitation in treatment. I would have put him through a full range of movement. As it was I did not quite know whether movement would increase the injury to the cells or not, so I took a middle course, gave him a full range of movements, made him do the same and ordered him to do one full range of movements once a day and to carry the arm in a sling until further orders. He has now quite free movement and practically no aching, but he still has a small rough patch.

I had a good example of moving joints by splints. The patient was a girl with a tuberculous foot. Of course movement in tuberculous joints is contraindicated. She was a girl, aged ten years, who had been under treatment for three years by two or three men, during which time she had a sinus which closed and opened; several small minor operations had been done. When I saw her foot it was a typical example of a foot with tuberculosis, chiefly in the tarsal joints. It was dangling in a most deplorable position, fully extended and fully abducted. She had 2° or 3° of movement in the ankle joint. I explained to her father the hopelessness of the position and though I could give no guarantee, I thought it worth while trying to rectify it. I ordered a back splint extending to just below the knee, a movable joint at the heel and two strong bars with a fine thread, laying stress on the fineness of the thread, with a movable screw and supported in front with leather and lace. I moved her half to one thread at a time and in a year and a half brought the foot to a right angle. After about two years the foot had almost a full range of movements and then ranged between that and a right angle, always taking several days in the movement.

At the end of that period her father had to leave the district. The foot was then almost normal, the sinus which had opened several times, was soundly healed. I ordered the splint to be worn for six months and then she was to report. At the end of that time I took off the splint; she is now dancing and playing tennis.

I will now deal with rheumatoid arthritis and I maintain and do most strongly without the slightest hesitation, that the treatment of all acutely and subacutely affected joints should be rest in the proper position and that the treatment of all chronically affected joints should be movement and that movement should be the patient's own voluntary movement. I will give you details of a case with treatment and the reasons for the same.

I had been treating a girl, aged twenty years, with a subacute condition for several months with varying success. She developed an acute attack and I admitted her to hospital. During that time all her joints, lumbar vertebral joints, sacro-iliac and all the joints of the extremities were affected. All her joints were firmly bandaged with plenty of wool; the painful joints were kept in a position of proper rest and were not allowed to fall into a natural position of rest. The joints were in a condition of acute hyperæmia and it was important not to injure the cells; the joint cavities were full of synovial fluid. Wool pressure was applied, as owing to its elasticity it helped to get rid of exudate and synovial fluid. It also acted as a splint. Joints were kept in a proper position of rest, to relieve spasm and overstretching of muscles and to relieve pain. A pillow was kept under the spine. When a joint's inflammation had subsided, the patient was ordered to move the joint through a range of movement without producing much pain. Sometimes I assisted her, always obeying Sir Robert Jones's laws on moving joints. The reason for early movement is to prevent the adherence of granulations on synovial membrane and on opposing cartilages. After eight weeks' stay the temperature had been normal several days, all her joints were much improved, she was allowed up in a chair and discharged as it was too heavy a financial drain on her parents. On the occasion of my first visit she could not stand, but the joints were improved. I taught her to stand and balance with her head up, her chin in, her chest out, her abdomen in, the inner edge of her feet straight and her knees straight. The reasons were that all her ligaments were soft from exudate, all muscles lacked tone. It was most important to keep the normal curve of the spine; if the curve were lost, ligaments would relax, causing sagging and alteration of the normal points of pressure in the vertebral joints followed by arthritic changes. The chest would have fallen in, impeding respiration, the diaphragm would have fallen in, impeding digestion. The knees were kept straight and the inner side of the feet straight for the same reason, so that the weight of the body should fall in the middle line of the bony triangular foot. Then she was taught full mobility of all her joints and finally to walk correctly. Careful instructions were given to the parents who cooperated in every way and laws of moving joints were given.

I think it is most important after any severe injury or immobilization for any period to reeducate the patient in the correct use of the limb, especially in the lower extremities. The exaggerated walking should be taught—heel, centre of foot, toe being used in turn and this being followed by a pause. It is a year since she, the last-mentioned patient, left hospital; she is now quite well except for a little creaking in some joints; she walks well, stands well and does her everyday work. We have met all the pathological requirements, we have rested and guarded inflamed cells, so the least amount of damage was done, we assisted repair which should take place in an ordinary manner, we assisted and restored function and finally we saw that all joints were used in a mechanically correct manner.

Now we come to rheumatoid joints in the quiescent period. All such joints have practically the same symptoms. Pain is present and due to strangulation of vessels which are unable to adapt themselves to the varying atmospheric conditions. In large joints limitation of movement is present. Wasting of muscles used in movement of joints occurs. Pathologically there is thickening round joints due to fibrous tissue strangling vessels and to exudate. In the joints immature cells grow in a disorderly manner, taking the place of highly specialized and matured cells; adhesions are also formed in joints. We all know that for the proper function of tissues it is necessary to have a good blood supply to carry the food to build up fresh cells and to carry away the waste products and that the lymph must be carried away by lymphatics. In other words, proper drainage is essential. We also all know that structures to function properly must be put to the proper use, failing that they degenerate. Knowing all these things, if there is any failure, we must try to rectify it. There are only two ways: to increase the blood supply and so get proper drainage. The joints and muscles must be moved so that they function properly. All recognize the necessity of blood supply and order different heats, electricity, massage *et cetera*. Now and then somebody advises movement. It is the crux of the whole problem and you cannot succeed without it. I have treated a number of joints with great success, that is if there has been a reasonable hope of success. Joints return to normal or almost normal shape, full movement is obtained, pain is decreased or abolished and patient complains of little disability or none at all. You will usually find some creaking, but it does little harm. I always order the same treatment. If joints are big, I order firm wool pressure and instruct the patient how to apply it. Hot and cold bathing is used night and morning for ten minutes at a time. Deep massage is ordered and instructions how to do it are given. Full mobility of joints is sought and full movements of joints are demonstrated. Also all movements are made slowly and steadily, with no jerking. At first one full movement is undertaken every day and then movement is gradually increased as the joint improves. I think this is important. I then give Sir Robert Jones's law. I now and then assist in movement and never give forcible movement.

I have a patient in hospital at present for some other cause. She is of the type that I have found most unsatisfactory to treat. The illness of this type of patient commences soon after a mental shock or prolonged nerve exhaustion.

The patient is aged thirty-six years. Fourteen years ago her mother had a stroke, the same night her hands became stiff and swollen; they remained so for a week and then went down. The same thing happened at the next menstrual period. The same sequence repeated itself for two years; she then became pregnant and was completely free from symptoms and whilst carrying and for nine months afterwards. She nursed her baby for one year. She then complained of pains in the shoulders; soon after that she developed a bad septic throat and has never been free since and practically all her joints have been affected. I put her on to movement a year ago, all her joints are now practically recovered; she had complete mobility in the spine, knees, ankles, shoulders, normal range of movements, but slight creaking in most of her joints. Her right wrist is almost normal; she has slight thickening and grating of the metacarpal joints of the index and middle fingers. In the left wrist there is a fair amount of thickening, but moderate mobility is present. The thumb, middle and ring fingers are definitely thickened. Fluid is present in the middle phalangeal joints of the middle and ring fingers, but mobility is moderately good.

Conclusion.

I hope I have not wearied you. I feel in giving this paper I am paying a tribute to Sir Robert Jones, whose humble disciple I am.

Our lives are full of interest and the interest increases with more knowledge, until we become lost in the wonder of it all.

We have the power of making and marring men's lives. We are the healers of men's bodies, the healers of men's souls. To us is given perhaps greater trust than is given to any other men, all the more because it must be absolute. To few of us is it given to be master craftsmen; we can all be good workmen. I hope when our time comes that the verdict to each and all of us will be: "You have been a good workman."

SOME THINGS THAT I HAVE LEARNED IN SURGICAL PRACTICE.[1]

By GEORGE J. LEY, M.B. (Melbourne),
Warragul, Victoria.

I SHALL endeavour to interest you in a few points gathered from my surgical experience. In the student days of thirty years ago there were not the facilities for acquiring the knowledge and self-confidence so necessary in dealing with the unknown quantities and qualities that may appear before you at any moment in your consulting room. Hence we had to tread warily at first and to use every patient that came in as a lesson for the future. A medical practitioner who follows on in this way and who learns each lesson well, must feel later on that the results of many years' work lead him to certain conclusions. Now, I have laboured in this way and I wish to tell you some of the things that I have learned.

The Acutely Inflamed Abdomen.

Take the patient with pus in the peritoneal cavity. Here is a condition wherein there are two main points to be kept well in mind. Firstly, there is the necessity to save the patient's life, if possible; secondly, having saved his life, we should see to it that the recovery is complete. What I mean here is that there is no organic disability left as the result of the illness or of the operation when he returns to his walk of life, for example, that he has not become constipated, nor dyspeptic, has no pain about the abdomen on movement, nor a tendency to an operative hernia. Now, these and other smaller symptoms may be put down as due to post-operative adhesions with often the nerve element as seen in the atonic condition of the bowels and it is to the possible prevention of these that I invite your attention. An opening is made through the abdominal wall and the pus freed. Any other irregularity is attended to. What next? Proper drainage has to be set up. Now, the more I see of the peritoneum in inflammatory conditions, the more am I impressed by its capability of coping with infective fluids. Well, the point here now is to help the pus to flow out of the peritoneal cavity by means of a long, well fenestrated tube introduced through the incision and laid well down into the pelvis and out through a stab wound in the loin. The peritoneum is now empty and should be able to look after itself, provided there is no further invasion from outside. This is prevented by carefully apposing the peritoneal edges at the bottom of the wound so as to shut the cavity completely in front. Then, before bringing the muscles together, the surgeon should introduce between their edges a small wick down to the peritoneal surface and leading outwards. The different layers are brought together as carefully as in an aseptic wound. The wick is withdrawn in about twenty-four hours and the hole kept patent by passing a probe into it occasionally. A certain amount of cellulitis which always forms about the incision is drained out through the small wick hole instead of breaking through the peritoneum and keeping it soiled. How often have I seen the patient next morning normal in temperature and pulse and out of hospital in a fortnight?

Compound Fractures.

In the treatment of compound fractures I have come to the conclusion that after the immediate symptoms of shock and hæmorrhage have been attended to, the next thing is to convert the fracture into a simple one. How many people do we see in public thoroughfares with limbs so distorted that they should smite our conscience as surgeons! I have seen many lying in hospital for six and eight months with sinuses still draining pus from some semi-detached fragment of decayed bone, the result of a compound fracture. When we come to reason it out, we wonder why the opening was not primarily closed up. One answer to me was that the fracture surfaces of the bones are sure to become septic and a free opening should be left for drainage. Really, the conditions seem admirable for keeping the broken surfaces aseptic. If there is hæmorrhage the blood is a good aseptic (and possibly antiseptic) wash with which to clean them. For the last several years I have invariably closed up the openings and have never yet struck septic trouble. How easy the case becomes after this has been done. Under X ray examination at the end of a week the fragments can be put into place and the necessary fixation apparatus applied; or if it is shown to be impossible to keep the fractured surfaces properly apposed, the limb may be opened under aseptic conditions and the fragments wired or plated. I mentioned "fixation apparatus" just now. I purposely did not say "splints" for the reason that I consider that splints generally should be discarded and their place taken by plaster of Paris according to Royle's method.

Now, just a few words about the preparation of the wound, before leaving this part of my subject. My rule is after cleaning the limb to get the surrounding skin painted with iodine right up to the edges of the wound, then to clean out systematically any possible foreign material from the inside with a one in twenty solution of carbolic acid, first with well wetted swabs wiping out every crack and cranny, then follow with well squeezed out swabs

[1] Read at a meeting of the Victorian Branch of the British Medical Association on June 18, 1927.

of the same lotion. By carefully suturing the surfaces together after this dressing one should confidently expect first intention healing. I do not wish to discount the usefulness of other or more modern lotions, but I claim 100% success with this. Just let me cite a case.

J.C., aged forty-nine years, had his tibia and fibula fractured at the junction of the middle and lower third while milking in the cow yard. There was a large rent across the front and extending up the outer side of the leg for about 6·25 centimetres (two and a half inches) and the bones were showing through. The wound was dirty. I bound him up temporarily and conveyed him to hospital. Under an anæsthetic the flesh wound was cleaned up and sutured together. The wound healed practically by first intention.

Rheumatoid Arthritis.

Rheumatoid arthritis in my opinion should receive more attention from the surgeon and less from the physician. I suppose I am free to say that opinion is united in regard to the prime cause —that is to say it is a septic process starting at some point and eventually manifesting itself at some other part or parts by the aid of the blood stream. Now, honestly speaking, it seems practically impossible to get rid of this trouble by the aid of eliminating medicines or by the antirheumatic drugs or by sending the patient to a warmer climate. No wonder some of the patients find their way into the quacks' hands—and please forgive me for thinking that some of them get more relief from that quarter than they do from us. What should we do? Clean up the possible nests where infection may be lurking. Have the teeth and gums attended to; remove the tonsils if there is a suspicion of trouble in them. Clean up any uterine irregularity. These may be considered the primary beds. In many cases the gall bladder gives evidence of trouble. It is most likely an extension from one of the above three sites and is apt to be clouded over by the accompanying symptoms of indigestion. Such gall bladders should be removed. Now when this insidious disease has extended to the limbs and has shown itself in one or more joints, my contention is that the treatment should be still surgical. If there is fluid in a joint and we regard it as part of an infection, then logically it should be removed in order to prevent it from doing further mischief. Let me briefly outline two cases.

Mrs. F., a middle-aged woman, came to see me about her crippled condition. Her two legs were stiff and painful at the knees. There was a moderate amount of fluid in both knee joints together with some thickening as well and great tenderness on handling. She begged as an old friend for some relief. I laid her up in hospital, aspirated both joints and replaced the fluid withdrawn with glycerine with 2% formalin, according to the method of the late John B. Murphy; bandaged them up firmly and kept her in bed for a fortnight. By this time the fluid began to reaccumulate, so I repeated the aspiration and injection. Let me admit that at this stage a representative of the Commonwealth Serum Laboratory called and pressed me to try a short course of horse serum. From this latter there did not appear to be any result. After keeping her for another week I sent her home and asked her to report later. In two or three weeks' time she sent word that the swelling and pain had disappeared and she was again quite active on her legs. Later on I heard she was still well.

My second patient, Mrs. P., was a woman of about forty-five years of age. She had had uterine trouble and general ill-health several years previously and was operated on by the late Dr. Rothwell Adam who excised her cervix. She came under my care for pains about the knee joints, headache and general malaise. On examining her in hospital I found a flaccid uterus with unhealthy discharge. Her uterus was curetted and later she was sent home comparatively well.

A few days later she was again under my care for severe tenderness and swelling at the metacarpo-phalangeal joint of the fourth finger. In spite of treatment the condition progressed till the joint was disorganized and so thickened and unsightly that she became distressed and wished the deformity removed at any cost. Under an anæsthetic I removed the finger and continuing the incision back exposed and removed the metacarpal bone to near its proximal end. The joint and this bone for more than half its length were just a mass of granulation tissue. The whole bed was cleaned well out, the wound healed by first intention and that woman has had perfect health ever since.

Tuberculosis.

While in the atmosphere of tuberculosis I beg to enter a plea for less surgery. No surgeon up to now is prepared to say after an operation for the removal of tuberculous tissue that he has completely removed the disease from that part. Nor can he promise that his opening up of the surrounding tissues has not made the way easier for a further dissemination of the tubercle bacillus. Ordinary observation, extending over years, tends to lead me to the belief that good hygienic surroundings together with nutritious food and moderation in habits will give a patient a longer fight for his life. This may be considered as hitting it from without. If we could at the same time find some means of hitting it within, some measure of success should be obtained. Now this disease has not a tendency to spread rapidly from any particular focus; in fact it seems inclined to lead a quiet life, allowing itself to become surrounded by a fairly dense wall. Here it remains peacefully until such time as there is a break-up in the internal arrangements of the bacillary community, either through overcrowding or a breakdown of their sanitary system or perhaps a desire on the part of the younger blood to shift camp. However it is, there is a change in the consistency of the mass, so that the surrounding wall is laid bare and migration becomes easily possible by way of the exposed small blood vessels. Shown in this manner, the problem before us is to find some means of rendering this mass of germs inert. I admit that my experience is limited, but I firmly believe that the methods employed and advocated by Calot, of Paris, are far in advance of anything else put forward up to date. Calot lays great emphasis on the necessity for the strictest attention to the smallest detail of his method and, this being granted, he practically guarantees good results. Let me give two examples from my own practice.

I was called to see a girl of sixteen who complained of symptoms in the right hip and down the back of the leg closely resembling those of an ordinary sciatica. She was otherwise in perfect health with a good family history. In fact I made a diagnosis of sciatica and prescribed a nerve sedative and a strong liniment. The following week she reported herself well and I thought no more about it. Some months later her mother told me she went on a visit to Melbourne and while there was suddenly seized with

this same pain which became so severe that she was taken to Saint Vincent's Hospital. I asked the mother to give me progress reports which she did. At first the condition was diagnosed as sciatica, but later on tuberculous trouble was suggested and to the test she gave a reaction. She remained under treatment in town for some time and eventually came home feeling and looking well. Some months later I was called to see her for a swelling in the lower part of the abdomen. On examining her I found a fluctuant swelling in the right inguinal region nearly the size of half an orange with no sign of inflammation about. I explained to the mother that it was a further manifestation of what she was treated for in Melbourne. I brought her back and laid her up in hospital and began Calot's treatment. After the ninth injection the pure injection fluid returned through the aspirating needle, so I went no further as this was the sign that it was healed. This occurred nearly three years ago and that girl has been perfectly well ever since. She is now training to become a nurse.

My second patient was a young fellow who first came under my notice about fifteen years ago for a tuberculous ulcer in the right leg below the knee. I laid him up in hospital for several months and did all I could by local and general treatment. He at last asked to go home. Later on he turned up at the Sale Hospital by which time there were sinuses leading into the knee joint. The joint was resected and he kept pretty well for about a year. Later he again came to me with some ulcerations beyond the old knee site. I laid him up for some time in hospital again. A couple of sinuses opened from the femur and he began to show signs of failing. To save his life I amputated the leg at about the junction of the upper and middle of the thigh. This gave him a new lease of life and he did moderately good work on his one leg with a crutch up to about two years ago. At this time he turned up with severe pain and tenderness in the tibia just above the ankle. I put him back in hospital. A few days later some pus broke through above the ankle and a sinus showed itself leading right into the centre of the tibia about 2·5 centimetres (one inch) above the ankle. He was now put under Calot's method of treatment. The sinus healed up, but later broke through again. It closed up for the second time, but opened again later on. It never seemed to give him much trouble now and the discharge was less. Under X ray there seemed dense bone surrounding the bottom of the sinus. I really believe complete healing was not effected because of the smallness and tortuousness of the sinus which prevented the viscous fluid from getting well in and filling the small space. However, it looks as if there is a dense barrier preventing any further extension and up to now he is going about as well as a one-legged man could be expected to.

THE SEX INSTINCT AND ITS DISORDERS.

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IT has now been definitely determined by research work that in the development of every individual the sex of his or her body depends upon which half of the chromosomes, separated during reduction-division of the sperm cell of the male parent, fertilizes the germ cell of the female parent.(1)

The primary sex characters of the embryo having been thus fixed by the chromosomes, it rests with the hormones manufactured by the interstitial cells of the testes and ovaries of the individuals so equipped to stimulate other parts of the body to develope the secondary sexual characters at the correct time, known as the period of puberty.(2)

These secondary sex characters give to the male and female their distinctive differentiation and the sex instinct. This sex instinct is responsible for the sexual method of reproduction, a process of reproduction of greater advantage to the race than the less elaborate asexual method of lower forms of life. The advantage of sexual reproduction over the asexual form is that numerous combinations of characters are formed in the crossing over of the chromosomes of the two parents, and this gives a wide range of characters in the members of the family for surviving unfavourable conditions of environment which might occur.

In asexual reproduction the progeny is exactly like the parent and the parent's parent, so that should the environment become unfavourable, the race might be dangerously thinned out or become extinct. The sex instinct is, therefore, a biological necessity to the human race, for without it man and woman would remain living together like a pair of geldings, or like Adam and Eve before the fall.

Up till the onset of puberty the sex instinct is unestablished. The attention given by very young children to their external genitalia is wrongly attributed by some writers to the sex instinct. Even in very small children before the age of puberty, there may be excited in the generative organs a "knismogenic" or tickling sensation, which differs from the tickling sensation experienced in other parts of the body such as the ribs. This sensation may be initially experienced by accidental friction of clothing or handling of the genitals by the mother or nurse during the process of drying after a bath or it may be produced by infantile priapism or worms and thereafter purposedly excited in a reflex way by manipulation. This sensation present in the child will form later on in the adult a link in the complete sex reflex and if the child is not cured of the practice, the danger of the development of the habit of masturbation at puberty is very great.

In animals the intensity of the sex instinct waxes and wanes periodically to comply with the food supply and other seasonal causes and the outward manifestations of this sexual excitement are many and varied according to the species. In man who has made himself more independent of season and food supply by the help of his higher intelligence, sex activity is not so seasonal, although rendered somewhat periodical by the menstrual epoch of woman.

That the sex instinct does not possess any conscious motive to procreate children is shown by the fact that primitive races like the Australian aborigines do not regard children as the result of coitus.(3) In contrast with this pristine sex instinct is the knowledge of the civilized races who use contraceptives.

The sex instinct exerts a powerful influence upon the lives of men and women, but it does so only in common with several other instincts which are supplied by Providence for the continuation of the race. These other instincts include the instinct of

self-preservation, the instinct of parental protection of the young, the instinct to eat and drink, the instinct to occupy one's self and the instinct to herd together in tribes and nations for mutual protection. The smell of food and the sight of water when the stomach is empty and the body dehydrating arouses the instinct to eat and drink in order that the material for growth and wear and tear may be supplied. In a similar manner the presence in the blood of hormones manufactured by the interstitial cells of the testes and ovaries and the sensory impressions of sight, touch, hearing and smell, cause ideomotor congestion of the generative organs and the desire for coitus. To insure this taking place Nature has made the sensation aroused by ideomotor and other reflex engorgement of the generative organs a pleasurable one. It is to the abuse of this pleasurable sensation that the sexual vices owe their origin in the same way that the abuse of food and drink leads to gluttony and drunkenness. These vices will be discussed later on.

During childhood up till the age of puberty every day brings its new excitements and interests sufficiently active to distract the normal child's attention from accidentally aroused "knismogenic" sensations. Unfortunately in some children with a neurotic temperament or suffering from some local irritation the attention may become fixed on this sensation and thus create an unhealthy influence upon the ultimate behaviour reaction of the adult.

With the onset of puberty and secondary sexual phenomena sex consciousness appears. Fortunately also at this time there is a powerful incentive to games, sports and hobbies, so that in the normal youth of both sexes there is no undue attention directed to sexual phenomena. A certain amount of curiosity is allowable and is always present in the normal intelligent youth. This should receive enlightenment of a suitable kind. In some cases, however, undue attention is focussed upon the subject to the mental and physical disadvantage of the individual. This undue attention may be the result of an introspective nature, unsuitable literature, vicious environment or a want of outside interests. By the mental process of facilitation sexual ideas, like all others, travel along a certain line of thought more readily each time they take that path and as each sensation of hearing, seeing *et cetera* is registered in the brain as an engram, the mind of that individual becomes practically a readily accessible library of sexual ideas. This can be more readily appreciated in the study of the conversation and delusions of the insane, which derive their origin from the engrams received since birth.

Although modern civilization brings sex matters more under the notice of youth, still, if the youth be normal, there is every reason to believe that proper environment, teaching and rational line of thought will eventually guide the sex instinct through the hair-trigger period of adolescence into the more crystallized social customs of mature age.

All forms of civilization favour the restraint of sex gratification up till a certain age or degree of maturity. Native races have peculiar initiatory customs and ceremonies which must be performed before the individual can be recognized as an adult and fit to become a parent.[4] Pacific Island natives keep the youth of both sexes apart, the immature or uninitiated males sleeping in a club house under the eye of the priests or old men of the tribe.[5] These races appear to take more active measures to enforce continence upon their youth of both sexes than do more civilized nations. The punishment of offenders by death and the power of superstition and "taboo" wielded through the agency of the priest are the main lines of preventive treatment.

The sex instinct has a far reaching, although unobtrusive, influence upon the daily life of individuals through its ramifications into all their activities. The family—the first social unit—formed by the prehistoric caveman and his wife, was dependent upon the sex instinct for its inception. The differences in male and female clothing, provision for separate carriages and lavatories for the different sexes, the manner in which dance and season football tickets are issued and many other instances can be cited to show the ubiquity of the sex idea. A distinction must be made between the influence of sex on the public and the influence of sex upon the individual. In the latter case its influence is of a vital nature, capable of great influence upon the conduct. Its influence on public life is weak, having been dissipated by being spread over a crowd. Any factor that threatens a man's personal interests, whether sexual, financial, religious *et cetera,* "hits him where it hurts most" and should the individual be unfortunately predisposed by a nerve vulnerability, there is the possibility of insanity ensuing.

In the functional nerve diseases, the subconscious cause of the whole trouble is frequently associated with the sex interest of the patient. Many writers would have us believe that the sex *libido* is the causative factor in nearly all nervous and mental diseases. The interpretation of dreams and symbols by at least one of these writers pays no compliment to the credulity and intelligence of his readers.[6] In the crowded cities of Europe amongst nations whose moral and business credits are quite unacceptable to us, the constant urge for sex gratification by normal and abnormal methods supplies the material from which certain European writers build up their ideas, but in countries whose business and moral reputations are good, we do not find such a mass production of those vicious perverts who as a rule comprise a very small proportion of the dregs of humanity in every country.

As the sex instinct resembles the instinct to eat and drink in being a natural provision of Nature, one would expect that any departure from its natural functioning would be fraught with disadvantage to the individual. Excessive indulgence causes nerve exhaustion with its train of symptoms. It also carries with it the risk, especially amongst the depraved, of adopting the practice of sexual perversions.

The effects of continence must be considered under different conditions. Continence, where there is no desire so far as the behaviour of the individual indicates, accompanies the state of "physiological old maid"—a name which has been applied to a certain type of man and woman who seems to be incapable of displaying sex interests of any kind. Their clothing is severe in character and they possess a peculiar rigidity in manner. These individuals appear to be genuinely chaste in mind and body.

Continence where the body is chaste and the mind is not, appears to be responsible for nervous and mental disturbances according to the vulnerability of the nerve tissue. Highly aroused and unsatisfied sexual desire has a harmful effect upon the individual. A congestion without detumescence in a part of the body so richly supplied with nerve plexuses could not fail to produce ill-effects upon the nervous system. *Coitus interruptus* in the opinion of gynæcological and psychiatric specialists is responsible for much ill-health and mental disturbance.

The barren uterus is almost invariably accompanied by myomata by the time the climacteric is reached.

Sexual Perversions.

Vice is the over-indulgence in what is otherwise a legitimate pleasure. As in other vices, such as gluttony and drunkenness and even in the present day search for pleasure, satisfaction is never attained. The individual indulging in excesses of any kind is always seeking fresh sensation to take the place of those fading away through the "familiarity which breeds contempt." The result is a resort to abnormal and unæsthetic sexual practices. *Fellatio, cunnilingus,* sodomy, and bestiality are openly advertised to travellers in some parts of the world, such as Port Said and the cities of the Levant. Vices are particularly attractive to the lazy, sensuous temperament and to the criminal type of the moron class of mental defective. The result is that perversions are met with mainly in those cities where the moral tone is degenerate. Every city in the world has its quota of the vicious and the sexual perverts.

There are certain abnormalities of the sex instinct which do not appear to be so surely based upon a vicious temperament. The inverts or homosexual individuals are considered by some authorities to be the victims of "fixation" or failure of the sex instinct to develope beyond the stage it was in when girls preferred girls' company to boys' company and when boys preferred boys' company to girls' company. In the same way they regard masturbation as a fixation in the cradle period and exhibitionism as a fixation at the stage when boys in their early teens are inclined to "show-off" before girls.

This theory of fixation would be an easy way of explaining these abnormalities, if it could be supported by facts. Masturbation, however, is practised by individuals both sane and insane as a lifelong habit, intermittently or for one short period of their lives—a fact which discredits the fixation theory. As applied to homosexuality, the theory of fixation may yet have to give place to an explanation based upon abnormal changes in the interstitial cells of the testes and ovaries of these individuals. J. R. Baker, of the Department of Zoology and Comparative Anatomy, University Museum, Oxford, records a change from female to male sex in a fowl whose ovaries became diseased and changed into testes. The result was that an egg-laying hen assumed male characters and fertilized a hen, thus becoming the father of some chickens.[7] Theoretically, a man or a woman with the wrong type of interstitial cells developing after puberty would fill the rôle of an invert.

Masochism is regarded as a pathological exaggeration of the submissive type of affection.

Sadism is regarded as a pathological exaggeration of the overmastering type of affection.

Fetichism is an exaggeration of the adoring type linked up with the mascot wearing temperament.

Sex Instinct in the Production of Nervous Diseases and Insanity.

It has been explained how any factor which threatens the welfare of the sex or other close interests of an individual with a vulnerable neurone, provided the worry and grief aroused are sufficiently intense, may act as a psychical stress and produce insanity. The ramifications of the sex interests of an individual are acknowledged to be numerous enough to leave the individual open to attack in many places. Some examples of these are:

1. The husband and wife. This may include the infidelity, illness or death of the husband or wife.
2. Love affairs. This may include the infidelity, illness or death of the loved one.
3. Any obstacle coming between the individual and the object of affection—sexual impotence, religious bar to marriage *et cetera*.

These examples also apply to functional nerve diseases, where the benefit to be obtained by the unconscious simulation of disease may be referred to one of the ramifications of the sex instinct.

Sex Instinct in the Symptoms of Insanity.

Patients uncontrolled by social and æsthetic instincts, which they have lost through their mental disease, shed their sense of modesty and make free expression of sex matters in their speech. Many of the delusions and hallucinations refer to some past experience or train of thought which has been stored up in the mind to be brought to memory during the chaotic ideation of the insane brain.

The sex instinct is exalted in some insanities such as mania and general paralysis of the insane. In consequence of this the speech and behaviour are sexual in character. Prior to certification and detention a previously moral woman may behave immorally and a man may attempt a criminal assault.

Patients suffering from melancholia and climacteric insanity show a depression of the sex instinct.

In puerperal insanity the sex instinct may show a reversion, the wife desiring to kill the husband. Compare this with the female scorpion who kills the male after coitus.

Many delusions of persecution are of a sexual nature and mutilations are frequently the result of a sexual delusion.

There seems to be some connexion between disorders of the sex organs and impulsive acts of violence. Acts of violence, such as incendiarism, are usually the work of a paranoiac or a person suffering from impulsive insanity associated with some disorder of the sex instinct.

The Jack the Ripper and the "Gorilla" type of outrage, now exercising the minds of the police of America, are types of impulsive insanity involving the sex instinct and destructive violence towards the victim.

Instances of senile males interfering with little girls are usually due to sexual impulses dependent upon the irritability of the bladder and an enlarged prostate.

Masturbation is a common symptom in both congenital and acquired insanity. As a cause of insanity it is rare. It is the gratification of a pleasurable sensation by an individual in whom the impulse is stronger than the control of the æsthetic sense. The nerve exhaustion it produces aggravates the mental symptoms from which the patient is suffering.

Conclusion.

It can be seen by the foregoing that in animals and human beings the sex instinct depends upon a definite biological mechanism. Man's more highly developed brain has placed him above the animals, with power to put himself below the animals, which latter he does when he indulges in vices and perversions.

There is a certain limit up to which sex interest is natural with definite harmless influence upon man's life. If through environment (nurture, injury and use) this sex interest is over stimulated, vices and perversions follow.

Certain of the abnormalities of the sex instinct are due to causes of which we are still in doubt, but observations on the lower animals justify the thought that they are due to physical changes in the body of which the victim is innocent.

Sex interests can act as psychical causes of insanity and functional nerve diseases, because of their nature their inviolateness is vital to man's happiness.

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BORDERLINE CASES IN RHINOLOGY AND OPHTHALMOLOGY.[1]

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I HAVE thought to base my paper upon the borderland conditions of ophthalmology and oto-rhinology as from the aspect of the ophthalmologist who finds himself unable to probe the mysteries of a case, and who needs the assistance of the specialist opinion of the rhinologist. And I propose to go through a series of symptoms and regions to emphasize the incompleteness of ophthalmology standing by itself.

Headache.

The general public sort themselves out in the maze of specialists and for the greater part do so extremely wisely, but a proportion have to be diverted from the channel self-selected. We very frequently meet with patients who are plagued with headache—a loose term applied to an ache, pain or discomfort in the area of the head from about the lower level of the orbital margin to the nape of the neck. I would defy any member of the profession to classify headache so as to make watertight compartments for the guidance either of the public or of his colleagues. There are a thousand and one ætiological factors from flat feet to intracranial tumours. It is not at all infrequent for patients to come to an eye clinic complaining of discomfort referred to the eyes, day or night, outdoors and indoors. Particularly often is the pain referred to the frontal region. We examine the vision and estimate a refraction only to find no defect in either, no muscle imbalance, no convergence anomaly, normal fundi. Palpation frequently indicates some soreness or tenderness over the floor of the frontal sinus, unilateral or bilateral, or perhaps it were better to say in the region of the upper and inner angle of the orbit, when the finger is pressed in a backward and upward direction. In view of the normal ocular findings the ophthalmic surgeon is forced to suspect some catarrhal condition of the accessory sinuses and the only competent manner in which to eliminate this or other intranasal pathological condition is to refer the patient to the rhinologist. Naturally it is undesirable from a variety of reasons, mainly the expense to the patients, to have to send them on and I should like

[1] Read at a meeting of the Section of Oto-rhino-laryngology of the New South Wales Branch of the British Medical Association on April 26, 1927.

some guidance as to what test we might apply in the way of transillumination *et cetera* so that we may put them through some preliminaries and perhaps diagnose some defect and then have some established lesion which would justify our referring them to the rhinologist. Much as the physician should be capable of using and interpreting the normal and grosser findings of the ophthalmoscope, it seems essential that the ophthalmologist should have some skill in the examination of the accessory sinuses and the nares. For instance, a septal spur or a deflected septum should be readily enough recognizable and the presence or absence of catarrh or of pus in the drainage areas of the sinuses. It is generally unsatisfactory to refer a patient for rhinological examination and get a normal report so that the patient is no further on towards relief. What can we ophthalmologists learn from you rhinologists in the detection of frontal and ocular aches not attributable to an ocular factor?

I have in mind the following patient who recently came before me.

A female, aged thirty-three years, complained of a dull ache over the right eye, pointing to her forehead as the site. It was of an intermittent character and appeared to be aggravated by close work and by stooping. Vision was $^6/_6$ in each eye and no refractive error was present. Near vision was equally good, 0·3 being read as close as 22·5 centimetres (nine inches). There was a certain amount of comparative tenderness over the upper and inner portion of the right orbit. The fundi were normal. There was no history of colds, recent or repeated. The patient was normal in all respects as far as the eyes were concerned, nor was there anything subjective or objective to indicate accessory sinus disease save the ache over the area of the right frontal sinus.

What is the disposal of such a patient? I know the possibilities of the accessory sinuses having latent trouble and am aware that a septal spur can cause eye ache and asthenopic symptoms from mere pressure contact, but I should like to get some guidance as to the more accurate separation of such nasal conditions, so that I may be a more definite guide and finger-post to such a patient in directing her towards the haven of relief.

Antral Disease.

A chronic empyema of the antrum is very frequently accompanied by few or no symptoms for years and may eventually give rise to symptoms affecting the eyes, such as dull orbital ache, intermittent flushing of the conjunctiva and the asthenopic symptoms of inability to read for any length of time in comfort. Transillumination will often fail to reveal any darkness and the diagnosis seems to be dependent upon puncture of the antrum, washing it out and finding muco pus or pus in the washed out fluid. Can the rhinologist indicate to us a method of investigation to enable us to be certain of confirming or eliminating the presence of antral disease in these suspected patients?

Having diagnosed the presence of antral disease I can assure the rhinologist we shall hand them to his care for treatment.

The Nasolachrymal Duct.

The nasolachrymal duct must necessarily be a great source of overlap between the two specialties and for myself I would rather transfer to the rhinologist the whole area from the *puncta lachrymalia* down to the nares. A conjunctivitis, especially a chronic one, not infrequently causes a rhinitis. Compare the very acute eczematous or scrofulous conditions frequently seen in children, in whom there is a very severe conjunctivitis associated with blepharitis and eczema of the skin of the lids, together with eczema of the nares and upper lid. It is obviously no use treating the one without an intelligent therapy to the other. The most chronic conjunctivitis we have to deal with, does not appear to produce a correspondingly persistent inflammation of the nasal mucosa, but it can and does involve the mucosa of the lachrymal sac and nasal duct. Congenital obstruction of the nasal duct by the imperforate fold of membrane at the nasal end is usually remedied by one probing, but the stricture associated with most types of chronic dacryocystitis is most resistant to probing and I think the ophthalmologist would be wiser to transfer these patients to the rhinologist; the latter could just as efficiently pass probes, should he deem it necessary, as an accompaniment to the treatment of the nasal mucosa *et cetera*.

My own experience is that probing is both so brutal and so unsatisfactory as to be abandoned in all save exceptional circumstances and if the rhinologist welcomes this field of activity, he may have it as far as I am concerned.

Excision of the lachrymal sac might still be considered within the ocular sphere, but such operations as dacryo-rhinostomy are, I think, more suitable for the rhinologist.

With a somewhat limited range of experience I would venture the opinion that in most patients, more particularly in public hospital patients, excision of the sac is the simplest and most satisfactory procedure. The sequelæ constitute very little inconvenience and are mainly centred round an intermittent overflow of tears—not much more than occurs in a healthy eye.

Many cases of epiphora are due to obstruction of the outlet of the naso-lachrymal duct in the inferior meatus and are attributable to polypi, congestion of the nasal mucous membrane and such-like conditions, so that an intelligent treatment can be directed to them only by the rhinologist.

It is a practice of mine to irrigate the nares with a solution prepared from *pulvis alkalinæ composita* for two or three days prior to most intraocular operations in order to get the nares as clean as possible and so reduce to a minimum the possibility of infection passing up the naso-lachrymal duct to the conjunctiva and so into the globe.

A certain amount of disinfection of the nares no doubt follows the use of "Argyrol" *et cetera* instilled into the conjunctival sac. How far the reverse holds I do not know, but it would be reasonable to suppose that the presence of an active conjunctivitis, chronic or acute or a chronic dacryo-cystitis could

have a septic influence upon intranasal operations, such as submucous resections of the septum.

Gunshot wounds, as frequently seen in soldiers and caries of the nasal bones with subsequent depression and production of saddle bridge, as for example in congenital syphilis, injure or obstruct the lachrymal sac or naso-lachrymal duct and concern the two specialties.

Focal Infection.

Focal infection has had an immense amount of attention and we have not got very much further forward. The uveal tract—iris, ciliary body and chorioid—is the ocular region most affected by sources of infection in remoter regions of the body. I have no hesitation in believing that many of the infections are due to a septicæmia, that is to say to the lodging of organisms themselves in the uveal tissues and there exciting an acute or chronic inflammation.

Equally established is it that other infections are to be attributed to toxic absorption, to the chemical effect of toxins generated at the original site of infection, absorbed by the blood and carried to the eye where the tissues are poisoned by these products.

I know of no greater puzzle than the definite, convincing and irrefutable ætiological diagnosis of many cases of chronic cyclitis, of vitreous opacities, low grade neuritis, acute iritis, foci in the chorioid or retina. Because a patient suffering from any of these conditions is found to have enlarged tonsils or even more obviously diseased tonsils, we must not rush to the immediate conclusion that they are the *fons et origo* of the ocular lesion, however anxious we may be to grasp at any straw of indictable sepsis. We must treat any possible source of infection, be it teeth, tonsils, accessory sinuses, gastro-intestinal tract (including bile sac infection), genito-urinary tract, as a rule more according to our whim or enthusiasm than according to an enlightened ætiological conviction. It is my own opinion that the tonsils are more likely to be a source of infection than any other pathological process associated with the nares and that they are a not rare cause of uveitis.

Purulent conditions of the accessory sinuses mainly concern the ophthalmologist when they have become chronic, produce a periostitis and subsequently orbital cellulitis or by a slow distension invade the orbit and produce proptosis. I think there is little call for me to dwell on these states as they are generally readily diagnosed when the frontal sinuses are concerned. But I should like to illustrate that empyema of the frontal sinus can invade the ocular and nasal zone and I do so by means of slides (pre- and post-operative) of a case of exceptional interest from the size of the empyema and the fact that it had gradually increased in size over a period of some seven years.

This patient has lost his right eye, as it had to be enucleated after a keratitis *e* lagophthalmos due to inability to close the lids from proptosis and inflammation.

I recall a patient with ethmoidal sinusitis whose orbit was invaded by pus and whose eye ball had undergone proptosis down and out; the cooperation of a rhinologist successfully relieved the condition. I could have evacuated the pus quite simply by myself, but I could not have given the efficient and necessary curetting of the ethmoidal sinuses which was essential in such a case, and mention this to emphasize that the two specialties working hand in glove can in certain types of cases render far more efficient service to the patient than either could by himself.

Focal Sepsis.

Focal sepsis occurring in the nose can be, like dental sepsis, of a latent nature and demonstrated only by X rays. A large number of cases of each type give rise to no symptoms and even if dental sepsis be found, it should not mean that the sinuses are not to be searched. Transillumination may give a normal result, whereas X rays may reveal dulness. The only accurate means of establishing the presence of antrum disease seems to be by puncture, washing out and examination of the return fluid both with the naked eye, the microscope and cultures. It is maintained by some that transillumination can be efficiently done by a general practitioner; if so it should be a frequent procedure in the hands of the ophthalmologist. As with so many other specialist manœuvres, it is not the actual performance of the examination, but the interpretation of the findings which is so technical. For example, a physician may be expert in the use of an ophthalmoscope, but liable to confuse a pseudo-neuritis of hypermetropia with a choked disc.

Two conditions of the optic nerve are generally associated with sphenoidal sinus infection, namely a definite optic neuritis with ophthalmoscopic signs of swelling, congestion *et cetera* and retrobulbar neuritis in which the papillo-macular bundle is especially liable to be involved, causing a central scotoma, but giving a normal fundus picture.

A recent investigation, carried out by combined rhinologist, ophthalmologist and neurologist authorities in Great Britain, arrived at the conclusion that retrobulbar neuritis is very rarely caused by sphenoidal disease. Davis treated seventy-six patients whose condition was diagnosed as retrobulbar neuritis and gives the following figures: Forty-one were due to diagnosable disease, syphilis, pituitary tumour, disseminated sclerosis, Leber's atrophy and albuminuric retinitis; of the remaining thirty-five, five only were associated with manifest nasal sinusitis and thirty had no obvious ætiology and in them nasal sinusitis was looked for. In the small proportion of cases which do occur, he considers there are four means of spread from the sinus: direct extension, venous thrombosis, a sequela to acute nasal catarrh and a toxæmia associated with bacteriæmia.

In his patients who had definite nasal disease, there was invariably present an optic neuritis associated with fundus changes, that is the neuritis was not of the retrobulbar type. In the idiopathic cases,

that is those in which no ætiological factors could be determined, there were no fundus signs and, therefore, these were to be regarded as of the retrobulbar type. Three of the patients were operated upon as regards the sinuses, but manifested no improvement. Of these thirty patients with idiopathic retrobulbar neuritis three were operated on with no improvement as mentioned above, two developed disseminated sclerosis, five remained stationary, fourteen recovered completely and the remainder could not be reported upon. An important point is that the majority have a tendency to spontaneous recovery. A point he makes is that in patients who manifest delayed improvement, operation upon the sphenoidal sinus even with normal signs, may be performed "as it is unlikely to do any harm."

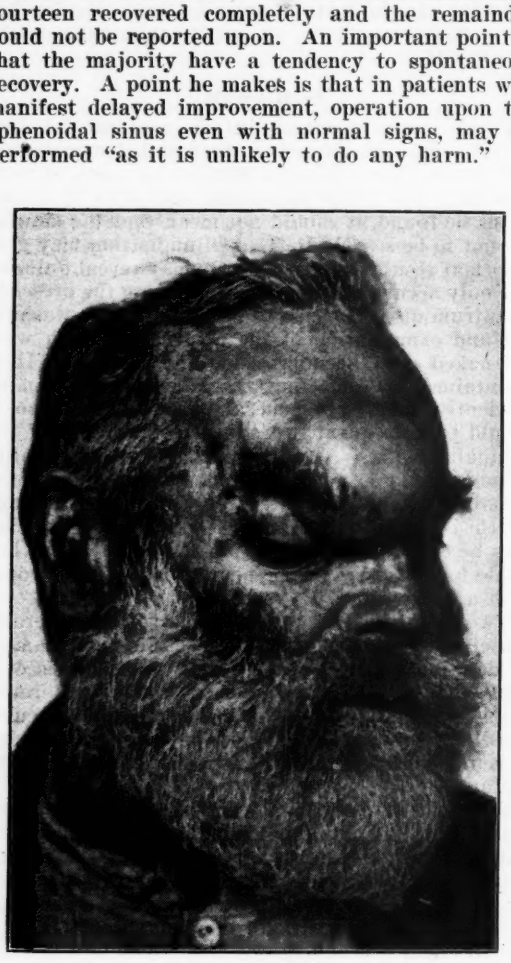

FIGURE I.
Showing Chronic Mucocele of the Right Frontal Sinus, pushing the Eyeball downwards, outwards and forwards.

Logan in his summing-up formed the opinion that two features are prominent in these cases of retrobulbar neuritis: an almost entire absence of com plaint by the patient of any nasal symptoms and the complete absence of signs of sphenoidal sinusitis when the nares are examined. In all his patients but two (operated upon or not) recovery took place with restoration of vision to $^{6}/_{6}$, $^{6}/_{9}$ or $^{6}/_{18}$, spontaneous improvement being usual. A number of his cases proved to be early disseminating sclerosis.

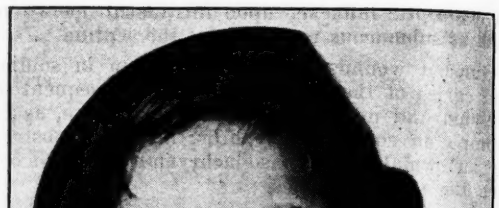

FIGURE II.
Showing Hydatid Cyst of the Orbit in a Boy Aged Five Years. Note the proptosis and intense chemosis.

Mayou thinks that a definite optic neuritis, even a choked disc, may be caused by sphenoidal sinusitis and that by pressure alone, apart from direct spread of inflammation; a retrobulbar type may occur, but

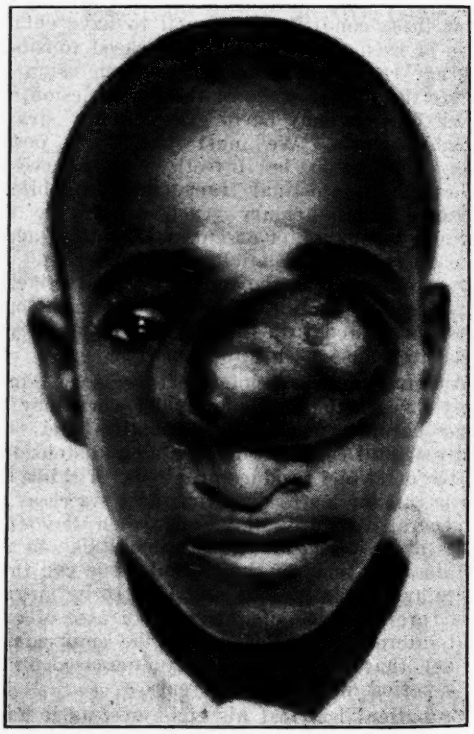

FIGURE III.
Showing Bilateral Encephalocele with Ulceration of the Skin.

his opinion is that sphenoidal sinusitis is a very rare cause of retrobulbar neuritis. *Post mortem* examination of the neuritis types often displayed the presence of a cerebral abscess, meningitis or orbital cellulitis secondary to the sinusitis.

Foster Moore shares the belief that Mayou expressed and states that a definite retrobulbar neuritis is very rarely indeed associated with sphenoidal sinusitis and he does not think that "latent sinusitis" has any real association with the neuritis.

Lesions which are obviously and wholly septic and involve the optic nerve by a direct extension, do not give rise to the retrobulbar type. He ends by stating that a true retrobulbar neuritis in association with sphenoidal sinusitis is certainly very rare, if it ever occurs.

I have dwelt upon this connexion, because the opinions above expressed are rather heterodox and because the ophthalmologist often meets the type of infection and is unable to arrive at a diagnosis without a report from the rhinologist. If the association of the two conditions be so rare, almost a rarity, we might as well avoid a routine referring of the patients for report by the rhinologist.

Optic neuritis secondary to otitic infection is invariably associated with cerebral abscess or meningitis. I cannot devote time to this question.

Orbital Tumours.

Orbital tumours frequently call for a report from the rhinologist, especially to eliminate chronic sinus empyema or to establish their origination from or extension to the nares. This is well exemplified in Figure I. The swelling in this instance was due to a chronic mucocele of the right frontal sinus,

FIGURE IV.
Showing Bilateral Meningo-Encephalocele (Front view).

FIGURE V.
Showing Bilateral Meningo-Encephalocele (Right lateral view).

displacing the eyeball downwards, outwards and forwards.

I may here mention a patient seen by me recently. There was an immense left-sided proptosis associated with the greatest chemosis of the conjunctiva I have ever seen. A negative report from the rhinologist assisted in eliminating sinus disease and was normal in all respects. Eventually the condition was found to be a hydatid cyst of the orbit which was removed *in toto* with an excellent end result (see Figure II).

Finally, I mention the rare condition of meningocele and illustrate it by lantern slides of two patients who were under my care (see Figures III, IV and V). It will be obvious from the appearance of these cases that no examination could be considered complete unless it embodied the findings of both the ophthalmologist and the rhinologist.

Conclusion.

In conclusion, the moral of my remarks seems to be that the ophthalmologist must rely upon obtaining an opinion from the rhinologist in quite a large sphere of his work. I think the combination of ophthalmology and rhinology an ideal one and would advocate every ophthalmologist having a training in rhinology. A little knowledge is frequently a dangerous asset, but mainly is this so when the individual does not know his own limitations. The judicious blending of a thorough knowledge of ophthalmology with a working knowledge of rhinology would render the ophthalmologist more capable of bringing comfort, relief and cure to the individuals who seek his care.

Reports of Cases.

SOME OBSERVATIONS ON THE DICK TEST AND THE PROPHYLACTIC VALUE OF SCARLET FEVER ANTITOXIN.

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AND

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DURING the epidemic of scarlet fever in New South Wales in the early part of last December an opportunity presented itself of applying some of the knowledge gained as the result of recent investigations of scarlet fever.

On a certain morning the senior night nurse from the Children's Ward at the Royal Prince Alfred Hospital reported sick with a sore throat and high temperature. A rash appeared in the afternoon and she was transferred to the Coast Hospital with a provisional diagnosis of scarlet fever which was afterwards confirmed.

One week later the senior night nurse who relieved this nurse and who had been a contact of hers on her last night on duty, developed similar signs and symptoms and was transferred to the Coast Hospital and diagnosed as suffering from scarlet fever. The same day the junior night nurse from this ward who had been on duty with the first nurse, did not return from her night off duty and her local doctor rang up to say that she was in bed at home with scarlet fever. No patient with a rash of any description had been in the ward for some time prior to the first case of scarlet fever developing, but about ten days previously a child had been admitted suffering from double *otitis media* with both ears discharging freely. The mother gave a vague history of an illness accompanied by a faint rash two weeks before and another of her children was in the Coast Hospital at that time with scarlet fever. This case was thus considered the most likely source of infection.

As the nurses who had developed scarlet fever had been in close contact with all the children, doing dressings *et cetera* and with the other nurses of that ward almost until the appearance of the rash, an epidemic among the patients and nurses was feared and it was decided to test all the immediate contacts for susceptibility to scarlet fever by the Dick test and then to administer scarlet fever antitoxin to those persons who gave a reaction to this test. A supply of scarlet fever toxin from the Commonwealth Serum Laboratories, Melbourne, was kindly made available by Dr. E. L. Morgan, Chief Microbiologist at the Board of Health, Sydney, and the Dick test was carried out on those contacts by injecting intradermally 0·2 cubic centimetre of a one in a thousand dilution of this toxin into the skin of the forearm. As a control, a similar injection of one in a thousand solution which had been heated for one hour in a water bath at 100° C., was given at the same time. The site of injection was inspected twenty-four hours later and to those persons who gave a reaction five cubic centimetres of a concentrated scarlet fever antitoxin, obtained from Parke, Davis and Company, Limited, Sydney, were given intramuscularly. The Dick test was then repeated on these persons at varying intervals.

The results of these investigations are appended in the accompanying table.

An analysis of this table reveals the following facts and conclusions:

1. A total of thirty-five persons were tested, fifteen adults and twenty children under the age of thirteen years. In

TABLE SHOWING RESULT OF APPLICATION OF THE DICK TEST.

Number of Patient.	Age.	Sex.	Previous History of Scarlet Fever or Measles.	First Dick Test.	Intramuscular Injection of Five Cubic Centimetres of Antiserum.	Subsequent Dick Tests After Antiserum.				Complications.
						48 hrs.	10 dys.	17 dys.	30 dys.	
1	29 years	Male	No	++	Yes	—	±	+		Extensive urticaria.
2	29 years	Female	No	++	Yes	—	+	+		Local urticaria.
3	25 years	Female	Measles	—	No					
4	21 years	Female	No	+	Yes	—	±	+		
5	22 years	Female	No	+	Yes	—	—	—	+	
6	23 years	Female	No	—	No					
7	23 years	Female	No	—	No					
8	19 years	Female	No	+	Yes	—	—	—	+	Serum rash.
9	19 years	Female	No	++	Yes	—	—	—	—	Pseudo-reaction around control ten days after.
10	19 years	Female	No	+	Yes	—	—	+		
11	21 years	Female	No	—	No					
12	22 years	Female	No	—	No					
13	25 years	Female	Doubtful Scarlet	+	Yes	—	—	±		Extensive serum rash.
14	22 years	Female	Measles	—	No					
15	35 years	Female	Measles	+	Yes	—	±	±		
16	7 months	Male	No	+	Yes	—	+	±		
17	1½ years	Male	Measles	+	Yes	[1]				
18	2½ years	Male	No	+	Yes	—	—	—		
19	7 years	Female	Measles	++	Yes	—	+	[2]		
20	10 years	Female	No	—	No					
21	5 years	Male	Measles	—	No					
22	10 years	Female	No	—	No					
23	11 years	Male	Measles	—	No					
24	11 years	Female	Measles	—	No					
25	5 years	Female	Yes	—	No					
26	2 years	Male	No	—	No					
27	11 years	Female	No	—	No					
28	12 years	Male	Measles	—	No					
29	5 years	Female	No	—	No					
30	5 years	Male	No	—	No					
31	1½ years	Female	No	—	No					
32	6 years	Male	Measles	—	No					
33	5 years	Male	Measles	—	No					
34	4 years	Male	No	—	No					
35	11 years	Female	No	—	No					

± Indicates weak reaction.
[1] Discharged before further tests.
[2] Sent home.

only one case, No. 13, was any history of a previous attack of scarlet fever obtainable. This patient, a nurse, had been sent to the Coast Hospital as suffering from measles about one year previously. After admission there her illness had been diagnosed as scarlet fever, but, in view of her reaction to the Dick test, the original diagnosis appears to have been the more likely.

2. Nine adults (60%) gave a Dick reaction, but only four children (20%) manifested this phenomenon. This latter fact appears contradictory to the results obtained by other workers, but the total number tested was very small and calls for further investigations. Exactly the same technique and material were used in all cases. Perhaps the amount injected was too large for a child.

3. Every person (twelve) who received the antiserum, failed to react to the Dick test forty-eight hours after its injection. Six persons (50%) failed again to react ten days afterwards, whilst three gave a weak reaction only. Four persons (33%) still gave no reaction after seventeen days had elapsed, while one patient gave no reaction to a Dick test carried out thirty days after the injection of the antitoxin. It would thus appear that the dose of five cubic centimetres of this particular antiserum was sufficient to produce a passive immunity for seven to ten days only.

4. Serum rashes of an urticarial character, both local and generalized, occurred in four cases, despite the use of concentrated serum. They rapidly disappeared after the injection of *liquor adrenalini hydrochloridi* intramuscularly.

5. No further cases of scarlet fever occurred among the nurses, nor did any of the children develope rashes, so that whether due to the use of the antiserum or not, the measures taken to prevent an epidemic were successful.

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PERTHES'S DISEASE.

By F. CH. DE CRESPIGNY, M.B., B.S. (Melbourne),
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I WAS interested to read in the journal of May 21, 1927, a report of three cases of Perthes's disease by Doctors Allan Pryde and W. P. Holman. I would like to report a case which came under my care in which the history of trauma to the affected hip antedated the occurrence of the limp in exactly a similar manner to the three cases quoted above.

A boy, aged seven years, was brought by his mother who said he had fallen from a bicycle and bruised his right hip nine months previously. He had had a persistent limp ever since, although he did not complain of pain in the joint or leg on walking.

On examination there was a prominence of the trochanter on the affected side as compared with the other side and less than 1·25 (half an inch) shortening in the leg. Flexion and extension of the hip joint was normal in range and painless. There was definite limitation of abduction with some limitation of internal rotation of the affected thigh. Two separate von Pirquet tests were done each with human and bovine tuberculin at an interval of a week between each test and in neither instance did a reaction occur. Two radiograms showed very typical pictures of Perthes's disease. The centre of ossification in the head of the femur was flattened and fragmented into several pieces. The neck of the femur was shortened and thickened. There was also some blurring in outline of the acetabulum.

There appears to be very little doubt, judging from the histories of the three cases reported by Doctors Pryde and Holman and from my case that trauma to the affected hip was an ætiological factor, although Lawford Knaggs in his last edition of "Inflammatory and Toxic Diseases of Bone" states that a history of trauma is exceptional and the ætiological importance of trauma is very doubtful. Although the ultimate prognosis is apparently good in the great majority of cases, treatment does not appear to have been successful in cutting short the course of the disease. As the cause is apparently a staphylococcal infection of the nucleus of ossification in the femoral head, I wonder if treatment with stock or autogenous vaccines has been tried to any extent. The literature at my disposal gives practically no information on this point.

RAT BITE FEVER IN NEW GUINEA.

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RELAPSING fevers, including tick fever and rat bite fever, have attracted considerable attention of late and the latter has been reported from many countries including Australia. The presence of the parasites of both relapsing fever and of rat bite fever has also been described lately from New Caledonia.(1)

In New Guinea recently a young male European was attacked by a disorder which presented some of the characteristics common to relapsing fever, tick paralysis and rat bite fever, and which proved finally to be rat bite fever subsequent to the bite of a flying squirrel.

On January 14, 1927, the writer was called to see the patient who had on December 30, 1926, been sent in to the Namanula Hospital, Rabaul, New Britain, after having had treatment for a time at Madang, New Guinea, the town at which the disorder originated.

It had at first been presumed that the trouble was a refractory form of malaria and quinine treatment both oral and intravenous had been pushed.

Clinical History.

The history was as follows:

H.R.C., aged twenty-six years, white, male, a works superintendent, was admitted on December 30, 1926. The patient had arrived in New Guinea twenty months previously, had at once contracted malaria (May, 1925). After several slight remissions he had had no fever or other illness until October, 1926, when, while stationed at Madang, he had several slight attacks of "low fever." He was living at the time in a house infested with ticks and considered unhealthy, previous residents having had much "fever" while in occupancy. Dogs in the house invariably became tick-infested and about November one died of tick paralysis. Several others that frequented the place were in very poor condition.

On December 1, 1926, he was feeling "off colour" and remained so for ten days, until on December 9, 1926, he became definitely ill and called in a medical officer who admitted him to Madang Hospital.

At Madang Hospital.

At that time he was not "over-bad," but complained of malaise, anorexia, constipation, slight headache, abdominal tenderness over liver and spleen, aching limbs (especially the legs) and stiffness and weakness of the arms and legs with definite difficulty in standing and walking. The knee jerks were absent and there was definite paresis. His temperature was found to be 39·4° C. (103° F.) and a blood slide was found strongly positive for subtertian malaria (rings) on December 9, 1926, and again on December 12, 1926.

He received intravenous injections of quinine bihydrochloride one gramme (fifteen grains) and subsequently oral doses of quinine totalling two grammes daily, but his temperature failed to react satisfactorily, falling im-

mediately after quinine injection, but rising subsequently in an erratic manner. His general condition failed to improve and after two to three weeks he was transferred to Rabaul by steamer.

At Rabaul Hospital.

On arrival, December 30, 1926, he was reported as suffering from subtertian malaria, with enlarged and tender spleen, slight jaundice and some emaciation and no very urgent feeling or signs of sickness.

Blood slides taken on December 30, 1926, January 4, 1927, and January 14, 1927, were normal in appearance and contained no malarial parasites. The urine and fæces were normal.

On January 15, 1927, when the patient was first seen by the writer, temperature was subnormal and the general condition was as described above. There was a patchy flushing of the skin. The patient stated that he had lost 12·6 kilograms (two stone) in weight. He also in response to inquiry regarding rashes *et cetera* stated that his whole skin felt "tender" and that if he, for example, struck at a sandfly, the skin struck and the striking finger both smarted.

A glance at the temperature chart, however, at once indicated a relapsing fever of six-day periodicity, resembling the so-called Persian form ("mianeh") and this provisional diagnosis was made.

The classical symptoms of relapsing fever are as follows:

1. A prodromal period of several days, two to twelve, with lassitude, malaise and headache.

2. A period of onset with headache, pain in the back and limbs, especially the shins; a temperature of 39·3° to 40° C. (103° to 104° F.). The skin is flushed and tender, there may be nausea and vomiting. Anorexia is usually complete and constipation or diarrhœa may be present. Prostration is great. The fever continues for four to seven days and the temperature then falls abruptly to normal or subnormal.

3. A period without fever follows, the patient feeling weak but well; but in four to eight days (often about a week) there comes:

4. The relapse. The relapses vary in duration, severity and number. In this case it was estimated that the sixth had occurred on January 14, 1927, the day previous to the writer seeing him. These would presumably have been (following the onset on December 9, 1926) on December 15, 21, 27, 1926, and January 2, 8, 14, 1927.

The last three of these are indicated in the temperature chart.

During the attacks the skin becomes yellowish and there may be a macular eruption. The liver and spleen are enlarged, painful and tender, and may cause acute distress. Eye complications may occur including photophobia, as may also bronchitis or pneumonia and nervous symptoms. Concurrent cellulitis is also recorded.

From the accurate resemblance between these signs and the actual history of the patient, the writer considered at the outset that the condition was a tick-borne relapsing fever. As no such case had ever been seen or recorded here previously, it was decided to withhold treatment until an attempt had been made to obtain specimens of the spironemes.

On January 20, 1927, a rise was to be anticipated and although so late in the disease, it was hoped that fortune might favour the investigation.

At this stage the patient complained of photophobia and a slight bronchitis which had been present throughout, became more pronounced.

Under dark ground illumination a short organism was distinctly seen which appeared to resemble a leptospira rather than a spironeme, and was apparently about 6 μ in length. Only one was seen in the drop, but most of the subsequent drops examined yielded occasional (though exceedingly rare) specimens. Staining failed to demonstrate the organisms. The possibility of rat bite fever was indicated by the parasites seen and the patient was questioned on the subject.

The patient now volunteered the information that on November 6, 1926, he had been bitten on the thumb by a "flying squirrel." The bite was merely two "needle-

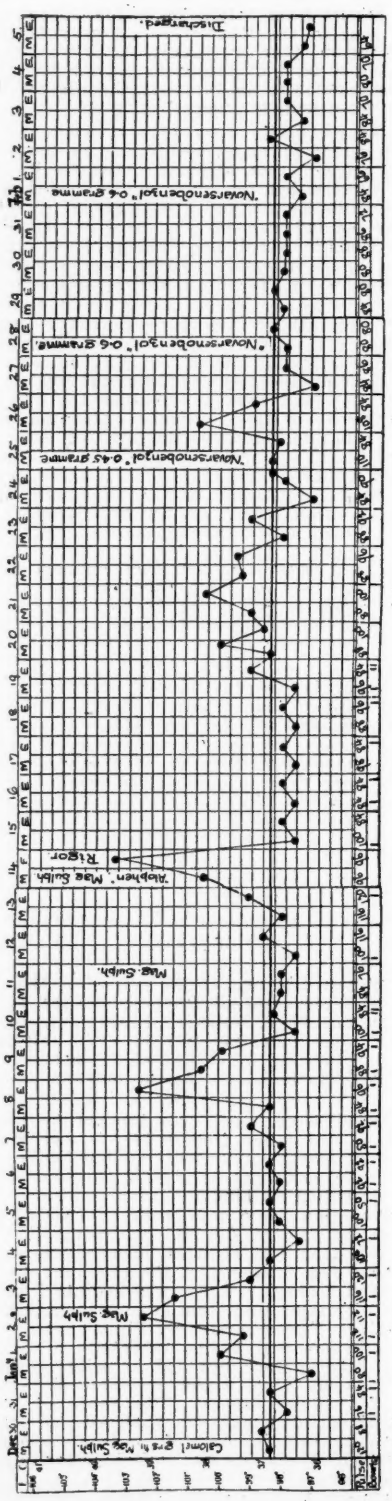

Chart of Dr. Cliento's Patient.

pricks" and was forgotten in a day or two. On November 21, 1926, however, the thumb "festered" and turned a bluish-red in colour and areas of lymphangitis appeared in four places above the wrist, over the middle of the forearm, about the level of the epicondylar gland and finally on the inner arm at the level of the insertion of the coracobrachialis muscle. A lymphangitic streak joined all four and the thumb, but the glands in the axilla were not painful or tender.

The thumb was incised at Madang on December 26, 1926, no pus being found and the condition gradually resolved. At the time the patient was admitted at Rabaul, there were no signs of trouble in the thumb and there had been no recurrences.

With this new evidence and the presence of the scanty organisms leptospiral in appearance and size the diagnosis was thought to be no longer in doubt and the condition was recorded as rat bite fever.

Comment.

The symptoms of rat bite fever which follow bites by infected rats, cats, weasels *et cetera* very closely resemble those of true tick-borne relapsing fever. Usually there is here also a well defined bluish-red exanthem, the lymph glands and vessels are largely involved and at the time of onset the original site of the bite becomes again tender and inflamed with areas of superficial lymphangitis. There is also a definite eosinophilia, the urine contains albumin and casts and there are rapid emaciation and anæmia; nervous symptoms are noted, among which latter it is observed that from the beginning the knee jerks are exaggerated.

In the case under review there were certain important departures from the classical symptoms laid down. The first important one was the absence of knee jerks and the definite paresis of the legs; the next one was the absence of any kidney signs and of the so-called typical exanthem; finally the onset did not coincide with the lymphangitis of the thumb, but followed it eighteen days later.

Injections of "Novarsenobenzol" 0·45 gramme were instituted on January 25, 1927, and repeated 0·6 gramme on January 28 and February 1, 1927.

The patient improved at once, though the first injection was too late to abort the relapse on January 26, 1927.

No further rises of temperature occurred, however, and he was discharged well on February 5, 1927, two further injections being subsequently given to confirm the cure.

To the best of the writer's knowledge the marsupial flying squirrel has never previously been incriminated as a carrier of infective spirilla of rat bite fever. If this case actually was an instance of that disease, it therefore adds this animal to the company of cat, weasel, rat *et cetera*.

The feature of outstanding interest to the writer, is that the case illustrates the essential similarity of rat bite fever and tick-borne fever, which might even be regarded as the same disease modified possibly by the nature of the carrier.

Finally, a point of considerable interest to Australians is the definite occurrence in this case of paresis of the legs with loss of knee jerks, similar to the cases of tick paralysis seen in Queensland.

Acknowledgments.

The writer has to express his indebtedness to Dr. Ian Mackerras, of the Bureau of Microbiology of Sydney, who has permitted him to peruse a paper on tick fever by him, containing an excellent list of the available literature on this subject.

It is hoped that Dr. Mackerras will shortly publish this valuable contribution for the benefit of the workers in this and related subjects.

Reference.

(1) A. Morin and J. Genevray: *"Présence en Nouvelle-Calédonie de Spirillum norsus muris et de Spirochæta recurrentis,"* Bull. Soc. Path. Exot., 1926, July 7, 1926, Volume XIX, Number 7, pages 529-532.

XANTHOMA OF THE LEFT KNEE AND HEEL.

By H. T. ILLINGWORTH, M.B., Ch.M. (Sydney),
Honorary Medical Officer, Auburn District Hospital, New South Wales.

MRS S., aged thirty-one years, consulted me for two swellings which she had noticed for the past twenty-one years. She had never had any previous medical advice about them, but as one near the heel was beginning to get painful, she thought she had better see about them.

The "lumps" had never been painful before and had never given her the slightest trouble except when she had knocked them. A mass situated near the knee had not increased in size, but one near the heel had increased in the last two and a half years to not more than one-quarter above its original size. The patient thought that it had increased much more in the previous three weeks than at any time previously. She had also noticed that it seemed to be becoming more shiny and red as though it was "becoming inflamed."

On examination the mass near the knee was found to be hard, attached to the skin, not freely movable, but apparently not connected with the subjacent bone and not cystic. It was situated just below the inferior border of the patella in the mid-line.

The mass at the heel was situated at the junction of the *tendo Achillis* with the bone and prolonged above that point about 6·25 centimetres (three inches). It was an oval-shaped mass, also hard, not freely movable, not cystic and apparently free from the subjacent bone. The mass at the knee was about the size of an unripe blood plum and of something like the same consistency. The mass at the heel was firmer if anything and about 6·25 centimetres (three inches) long by five centimetres (two inches) wide and perhaps 2·5 centimetres (one inch) in depth.

The patient was advised to have the masses removed and to have them submitted to microscopical examination. She was operated on at the Auburn District Hospital on May 24, 1927, when the following condition was found. The mass at the knee was shelled out without undue difficulty, the skin being loosely attached to it, but it was free from all the structures surrounding it.

The tumour at the heel was, however, found to be connected intimately with the *tendo Achillis*. It was indeed so closely bound up with it that we were unable to separate it from the tendon structure at all. It was decided to take as much of the tumour with as little of the tendon as possible. The whole mass was split across from side to side, leaving a fairly thick strip of fleshy and tendinous tissue to serve as the *tendo Achillis*. The most superficial of the two strips was then carefully dissected away from the surrounding tissue and removed. A layer of tendon sheath which had been opened originally, was then sewn over the remainder which had been left, and the wound was closed in the usual way. It healed without incident and the patient is now at home walking without any difficulty.

The Microbiological Laboratory reports as follows:

> Sections of both pieces of tissue show a fibrous stroma containing groups of large polyhedral cells with foamy cytoplasm and small eccentric nuclei. There are in some areas masses of large rhombic spaces from which crystals, probably cholesterin, have been dissolved out. In other areas there is fairly extensive yellowish pigmentation of the cells and associated with the crystals are multinucleated giant cells of foreign body type; these also show pigmentation.
>
> The growths are xanthomata. These tumours frequently occur in association with diabetes. We would be grateful for information as to the presence or absence of glycosuria.

I thought the above case of sufficient rarity and interest to report it and must also express my indebtedness to the Board of Health for its report and to Drs. J. J. McIntosh and J. A. Lawson for their assistance and for their permission to publish these notes.

Reviews.

A MANUAL OF PRACTICAL SURGERY.

THE ninth edition of Pye's "Surgical Handicraft," edited and largely rewritten by W. H. Clayton-Greeve, is one of those volumes which most of the present generation have know during both their student and hospital-resident days.[1] The present edition, published in 1924, purports to bring the material up to date. It is obvious that as the first edition was published in 1884, it is very difficult to do this without completely, instead of "largely" rewriting it. The book still remains, however, what it professes to be—a reliable and practical "manual of surgical manipulations, minor surgery and other matters connected with the work of house surgeons and medical dressers." These persons will still find its directions explicit, concise and a useful aid during the apprentice years following graduation.

Here may be found definite directions how to handle the tools of trade; here are the various "tips" and "tricks of the trade" which later on become second nature to the more experienced surgeon and general practitioner.

The matter is well arranged and reference rendered easy by the use of sections as well as chapters and the author has been assisted in bringing the reading matter up to date by the better known of latter-day English authorities writing on their various specialities, such as eye, ear, nose and throat conditions, the teeth, anæsthesia *et cetera*.

The main criticism to be levelled at the work is that the old matter has not been ruthlessly enough cut away. There is still too much of the air of 1884 about the book. Old obsolete instruments and splints are still illustrated and examined and proved modern methods in many cases are just mentioned or omitted altogether. For instance, the patient is said to be "free" from gonorrhœa "when microscopic examination fails to demonstrate the gonococcus," while complement deviation tests, vaccine therapy and diathermy in the treatment of this common complaint are not mentioned at all.

On the whole, however, this remains an informative and useful and even necessary book for students, house surgeons and general practitioners.

SYPHILIS AND GONORRHŒA.

THE "Diagnosis and Treatment of Venereal Diseases" by Dr. David Lees has been produced for the student and the practitioner.[2] It is essentially a practical work and mirrors the teaching of the Edinburgh Medical School. The book is divided into two parts, syphilis and gonorrhœa. A pharmacopœia has been incorporated and the general index has been carefully compiled. The illustrations are clear and germane.

The section on syphilis covers diagnosis and treatment very fully. Prognosis is taken seriously and active treatment is spread over two years. There is a short chapter on the chancroid and complications which may ensue. The section on syphilis closes with a standard of cure and here the author voices what is becoming general knowledge, that "there is no definite standard which can be laid down for all patients" and that some, even when treated early never fail to react to the Wassermann test.

In the section on gonorrhœa the same careful instruction regarding diagnosis and treatment is found. Both routine and special methods of treatment are described and methods of attempt at abortion of the disease are given. Diathermy is mentioned only in connexion with arthritis where it has a decided effect when combined with other treatment.

There is a chapter on vaccine and other chemotherapeutic agents.

The chapter on the urethroscope is somewhat meagre, but it must be recognized that the author has had to restrain himself, as he has not written for the specialist.

We can detect only one serious mistake in the volume and that lies in the prescription headed *Mistura Santali Composita* where the dose of sandalwood oil works out at eighty minims thrice daily and the error repeats itself in the metric translation.

On the whole the book has been carefully planned, contains much useful practical information and deserves a place on the medical bookshelf.

EPOCHS IN MEDICINE.

DR. CHARLES DANA, of New York, in his book "The Peaks of Medical History," has succeeded in compressing into the small compass of one hundred pages a most interesting survey of the history of the medical profession. He has taken six names of famous medical discoverers as being representative of the six periods in history at which the great advances in medical knowledge were made.

The first of these peaks is the age of Hippocrates and the date B.C. 460 and the author summarizes the achievements of Greek medicine.

Following on the age of the "divine Hippocrates" about one hundred years elapse, of which we know very little from a medical point of view until we climb the second of our peaks and find the School of Alexandria, associated with the names of Herophilus and Erasistratus, the great anatomists. The school of Alexandria, about which very little is really known, was founded in B.C. 300 by Ptolemy Soter, the brother-in-law of the great Alexander.

Four hundred years now elapse and we come to the name of the great physician Galen who was born in A.D. 130. Galen, as Dr. Dana says, "touched nothing in medicine that he did not adorn with his learning and yet injure with his theories."

Before we reach our next summit we have a long and hard climb through what has been called "the Age of Coma" in medical history, the long fourteen hundred years during which the lamp of medical progress burned very dimly, to burst into a blaze with the coming of the Renaissance in 1500. With this "peak" are associated the great names of Vesalius, Paracelsus and Paré.

A great Englishman occupies the centre of the stage, when about one hundred years later we reach our fifth peak. The immortal Harvey (the three hundredth anniversary of his book, "*De Motu Cordis*," is to be celebrated next year) and with him his great countryman Sydenham, together with many other great names. From now on to our seventh peak the way is crowded with discoveries of minor importance until we come in 1800 to another great Englishman, Jenner, whose immortal discovery saved the world from one of its greatest scourges.

The book is most copiously illustrated with portraits, views and reproductions of medical scenes from manuscripts and early medical books. The printing and general make-up of the book are delightful and reflect the greatest credit on the publisher, Mr. Paul Hoeber, of New York.

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[1] "Pye's Surgical Handicraft, Edited and largely rewritten by W. H. Clayton-Greene, C.B.E., B.A., M.B., B.C. (Cambridge), F.R.C.S. (England); Ninth Edition, Fully Revised; 1924. Bristol: John Wright and Sons, Limited. Sydney: Angus and Robertson, Limited. Demy 8vo., pp. 619, with illustrations. Price: 21s. net.

[2] "Practical Methods in the Diagnosis and Treatment of Venereal Diseases for Medical Practitioners and Students," by David Lees, D.S.O., M.A., M.B., F.R.C.S.; with introduction by William Robertson, M.D., F.R.C.P., D.P.H.; 1927. Edinburgh: E. and S. Livingstone. Crown 8vo., pp. 621, with illustrations. Price: 15s. net.

[1] "The Peaks of Medical History: An Outline of the Evolution of Medicine for the Use of Medical Students and Practitioners," by Charles L. Dana, A.M., M.D., LL.D.; 1926. New York: Paul B. Hoeber, Incorporated. Demy 8vo., pp. 105, illustrated with 40 full page plates and 16 illustrations in the text. Price: $3.00 net.

The Medical Journal of Australia

SATURDAY, AUGUST 6, 1927.

Industrial Hygiene.

The report of the third conference on industrial hygiene has recently been issued by the Department of Health of the Commonwealth. The conference was held on May 26, 1927, as a direct result of a recommendation of the Royal Commission on Health. The Commonwealth and the several States were represented. The scope of the discussions was wide and the resolutions were both constructive and far reaching. Two conferences on industrial hygiene have been held before this one. The first took place in September, 1922, and the second on August 19, 1924. It will be remembered that the report of the Royal Commission was issued at the end of 1924 and that the Federal Health Council was formed in 1926. It thus appears that the Commonwealth Department of Health has anticipated the action of the Federal Health Council to a certain extent and that a commencement was made five years ago to coordinate the activities of the health departments of the several States, even before the Royal Commission put forward strong arguments in favour of the standardization and uniformity of effort. It has been pointed out over and over again in these columns that the problems connected with the maintenance of health and the elimination of avoidable disease and trauma are based on principles which do not vary. It is an easy matter to adjust the application of these principles to the varying conditions of different countries and States; the important point to remember is that the most effective system of preventive medicine can be carried out with simple legislative powers. The procedure should always be inquiry into the cause and nature of the hygienic defect and the application of a remedy based on the result of the inquiry. Measures adopted for the control of a disease or for the removal of an industrial hazard that are not based on a full recognition of all the contributory factors, must be regarded with suspicion. Experiment in public health, like experiment in other provinces of medicine, is justified and praiseworthy, provided that it is conceived in a scientific spirit and conducted in the full light of day. On the other hand faddism, action based on a mere idea or vague hypothesis, cannot be tolerated in connexion with human lives.

It is highly significant that eight of the fourteen resolutions of the third conference involve inquiry into the factors concerned in certain phases of industrial hygiene. For example in the fourth resolution the representatives of the Commonwealth and State health authorities advocate a general investigation into the hygienic standards in factories. It will be remembered that Dr. C. Badham, Medical Officer of Industrial Hygiene of the Department of Public Health of New South Wales, undertook an inquiry into the conditions obtaining in certain textile factories. He set up a scale of dry katathermometer readings which he proposed to apply as a standard for the regulation of air movement and ventilation in factories. The amount of cooling expressed in degrees Fahrenheit and the air movement expressed in feet per minute are standardized for temperatures varying from 70° F. to 90° F.. This piece of constructive work is to be extended and the conditions under which factory employees are working in all parts of the Commonwealth, are to be investigated. A committee has been formed to ascertain the frequency of accidents among minors in factories and the factors contributing to these accidents. The information collected as a result of these inquiries will be carefully collated and utilized as a basis for action. Blind collection of statistics to be accumulated in pigeon-holes and forgotten has been carried out long enough. The proposals of the conference indicate the elucidation of facts, their proper arrangement and the drawing of conclusions when all the available facts have been considered. Moreover it will be noted that the inquiries will be for the benefit of the people of Australia, not for those residing in one State. It is incomprehensible that Dr. Badham should have conducted valuable researches in 1923 and that the lessons he offered to the Department of Public Health of his State should have been ignored by the departments of

public health in the other five Australian States. The conference has considered a measure that was introduced into the House of Commons last year for the application of the principles of industrial hygiene to offices. The members apparently recognized the foolishness of demanding a strict control over the conditions of labour in factories and of failing to prescribe hygienic standards for clerical workers in offices. That there is need for reform in this direction is common knowledge. The attitude of the State authorities in this connexion is illogical. Offices attached to factories are subjected to the same control as the factories themselves, while offices precisely similar save that they are not associated with factories are not subjected to inspection.

The consultation of representatives of the several States and of the Commonwealth on matters connected with industrial hygiene and their determination to build up a sound system on the foundation of carefully collected data can be regarded as an earnest of a real reform in the control of the public health. The Royal Commission on Health has shown the need for this reform and has given some guidance in regard to its nature. The institution of the Federal Health Council is perhaps the most important event in the history of the Commonwealth. By its means and through its influence the health laws will gradually be amended into a simple form and the effort to combat disease and accident in all parts of Australia will be sincere, scientific and effective.

Current Comment.

NECROSIS OF THE RENAL CORTEX.

AMONG the more rare pathological changes of the kidney is that known as necrosis of the renal cortex. This necrosis is symmetrical and while it almost invariably becomes manifest soon after childbirth, its occurrence has been reported after scarlet fever, diphtheria, pneumonia and peritonitis. The child is almost always still-born. The symptoms resemble those of obstructive anuria and uræmic manifestations may be present. As would be expected, necrosis occurs in kidneys which are the site of previous disease, but this is not always so. Jardine and Kennedy, Torrens and Rolleston have reported cases in which no old change was found in the kidney. Thrombosis of the interlobular vessels is a constant feature, but its causation and its relationship to the necrosis has been the subject of much discussion. In these circumstances a recent communication by Arthur Crook to the Section of Obstetrics and Gynæcology of the Royal Society of Medicine is of interest.[1]

Crook reviews eleven cases of cortical necrosis collected by Rolleston in 1913 and gives a short account of seven others reported since that date. In addition he gives full details of the history of a patient of his own who recovered from the condition. His patient was a *primipara*, aged twenty-nine years. She gave a history of having had scarlet fever. At the thirty-first week of pregnancy her legs become swollen, the urine contained acetone and diacetic acid, but no albumin. The acetone and diacetic acid disappeared with treatment and the patient had a premature labour in the thirty-fourth week, giving birth to a dead child. After confinement which was completed under light anæsthesia by the application of forceps, symptoms of anuria appeared. Vomiting occurred. Small quantities of urine were drawn off by catheter. The urine contained "a small quantity" of albumin, diacetic acid and acetone. The blood urea rose to three hundred and ten milligrammes per hundred cubic centimetres and on the fifth day decapsulation of the kidney was performed. The blood urea continued to rise after the operation and on the eighth day after confinement was three hundred and eighty eight milligrammes. Energetic treatment was carried out by hot "imperial drink" with acetate of ammonia, the application of hot packs to the skin, the subcutaneous administration of saline solution and the intravenous administration of glucose in saline solution. After recovery a minute trace of albumin was found in the urine and this was attributed to cystitis which was present before the operation.

A piece of kidney tissue was obtained for microscopical examination. The principal lesion present was focal necrosis. The tubules were chiefly affected, but one totally necrotic glomerulus was seen. The stroma was not necrosed, but was the seat of much polymorphonuclear infiltration and contained much nuclear *débris*. In relation to the necrotic foci there were several tubules (thought to be collecting tubules) in which the epithelial cells were large and active looking with hyperchromatic nuclei. In relation to the foci also, as well as in other parts of the section, there were aggregations of intensely engorged capillaries. Apart from the focal lesions the chief changes in the kidney were (i) undue cellularity of many glomerular tufts and the presence in many of them of polymorphonuclear leucocytes and nuclear *débris*, (ii) the presence of blood in one or two Bowman's capsules, (iii) the presence of many desquamated epithelial cells in some of the convoluted tubules and of blood, hyaline casts and *débris* in others. There was seen everywhere a considerable excess of polymorphonuclear leucocytes.

Before the question of the causation of this condition is discussed, it may be well to draw attention

[1] *Proceedings of the Royal Society of Medicine*, June, 1927.

to several points in which this case differs from the majority of others which have been reported. In the first place there was no high blood pressure. The systolic pressure was 95 millimetres of mercury two days after a blood urea estimation of 372 milligrammes had been made. In the second place the high urea content of the blood was not accompanied by convulsions. In the third place there were no severe toxæmic symptoms present before labour. In the fourth place recovery occurred.

In regard to the pathogenesis of the condition it may be concluded from the histological findings described by Crook that the lesions are the result of an acute intoxication which may be either of bacterial or of metabolic origin. Crook apparently made no bacteriological investigations in connexion with his patient. In fact very few attempts have been made to incriminate microorganisms in the ætiology. Reference to Rolleston's paper of 1913 shows that he found *Streptococcus pyogenes* in the spleen and in the blood of the ovarian vein. In the former situation this organism was associated with *Bacillus coli communis*. It must be remembered that failure to isolate microorganisms does not exclude them from any share in the ætiology. Non-bacterial causes have been shown to produce this condition. Symmetrical necrosis has been described in connexion with corrosive sublimate poisoning by Heineke, but Trevor in his report on the *post mortem* findings in Rolleston's case denies this association. At the same time Trevor points out that the degenerative changes seen in the tubal epithelium are indistinguishable from those met with in the so-called "nephritis of pregnancy."

The most commonly found pathological change in the cases reported in the literature is thrombosis. In Crook's specimens none was seen. He offers two explanations for this. The first is that necrosis is the primary lesion and that thrombosis follows it. The second and more probable is that no thrombosis was found because such a small piece was available for examination. While it is difficult to conceive that a poisonous substance capable of causing necrosis of a kidney cell would not injure the endothelium of the blood vessels and make thrombosis likely to occur, the cells of the kidney are directly concerned with the elimination of toxic substances from the body. The urine is formed as a result of filtration through Bowman's capsule and concentration by the cells lining the tubules. These cells have thus to withstand a continuous onslaught of material which may be detrimental to their integrity. In these circumstances necrosis of renal cells might precede thrombosis. On the other hand it has been shown that agglutinative hyaline thrombi are formed in the capillaries in many infective and toxic states. These thrombi were first described by von Recklinghausen, but their importance was recognized by Flexner, by Boxmeyer and by Pearce. They result from the agglutination of red blood cells. This process would, of course, explain the occurrence of necrosis as a secondary manifestation. It was on this basis that Trevor explained the necrosis in Rolleston's case. In the present state of knowledge it cannot be determined which, if either, of these two, thrombosis or necrosis, is primary. If this question could be determined it might throw some light on that other more common condition or group of conditions known as the "toxæmias" of pregnancy.

THE ORIGIN OF URINARY CASTS.

DURING the course of an acute nephritis the cells lining the tubules of the kidney are subjected to altered conditions which may be of such a nature that recovery is impossible. The cell may then undergo disintegration or it may be set free in the lumen of the tubule to be carried away in the urine with other *débris*. Chronic as well as acute conditions, however, have a deleterious effect on renal cells and casts of various kinds make their appearance in the urine. Textbooks are remarkably bare of any information on the way in which urinary casts are formed. The subject has been investigated and much has been written about it, but finality has not been reached. C. Posner applied the surface tension phenomena to the production of casts and sought to show that abnormalities in physical condition were responsible. R. M. Smith holds that urinary casts arise as the result of the fusion of desquamated epithelium in the lumen of the tubules. Henry Jackson, junior, has recently written about this matter.[1] He agrees that Smith's view is probably true in certain cases, but doubts whether the explanation is adequate in chronic nephritis. He points out that in the presence of many casts there may be little or no desquamation of renal epithelium. While studying the changes brought about in the kidneys of rats by continued feeding with high protein diets, he observed that certain cells were budding or extruding some portion of their substance into the lumen of the tube. The first change is a swelling or vacuolization of the inner portion of the cells lining the convoluted tubules. The cell becomes œdematous at its inner end. As the œdema increases, the cell swells still further and there is formed a pear-shaped bud connected with the main body by an attenuated stalk. This bud eventually becomes constricted off and lies free in the lumen. These globular bodies form the circular reticulum of the kidney so often seen in kidney sections. Under the influence of the urine the globular bodies partially disintegrate and the coarse masses of deeply staining material which they contain, become compressed about clear circular areas. The mass becomes homogeneous and is the immediate precursor of the true casts seen in sections. Jackson claims to have seen this series of changes in human kidneys affected by chronic nephritis. He does not believe that this explanation holds for all urinary casts, especially for those seen in acute nephritis, but he thinks that it is adequate and logical "in certain cases." He mentions the action of the acidity of the urine and also refers to the œdema of the cell. He does not attempt to apply physical considerations to his findings. Had he done this, he might have come to conclusions similar to those of Posner.

[1] *The American Journal of Pathology*, May, 1927.

Abstracts from Current Medical Literature.

DERMATOLOGY.

Poikiloderma Atrophicans Vasculare.

K. M. BOWMAN AND E. C. CLARK (*Archives of Dermatology and Syphilology*, May, 1927) report a case of *poikiloderma atrophicans vasculare* occurring in a man, aged thirty-nine years. Eighteen certain cases have been described in the literature. The disease in the authors' patient dated from an exposure to cold when he was twenty-three years of age. Both hands and feet were frost-bitten on this occasion. The family history was good, but the patient had suffered from frequent minor ailments early in life. "Pale pink blotches" appeared first on the face, the rash gradually progressed, affecting the whole body, until fourteen years later gangrene affected several toes and fingers in turn. A year later cellulitis appeared first in the right leg up to the knee, then in the left leg. The right arm subsequently became œdematous and this in subsiding left the fingers of the right hand atrophied and stiff. A year later difficulty in swallowing and vomiting occurred and the patient became progressively weaker and died some months later with symptoms of cardiac failure. Trophic ulcers were present. An individual plaque resembled somewhat an X ray burn. The heart and lungs were normal. There was a cataract in each eye with no reaction to light or accommodation. No other abnormality was revealed. The urine was normal. The Wassermann test yielded no reaction. A blood count revealed only a slight increase in the white cells. The basal metabolic rate was low (—15·5 and —14). In the diagnosis leprosy, syringomyelia and Raynaud's disease were excluded. From the autopsy the dermatological diagnosis was *poikiloderma vascularis atrophicans*. The findings included: (i) cutaneous macular rash, (ii) trophic ulcers, (ii) atrophic contracture of the hands, (iv) absence of the terminal phalanges of the fingers and the toes. There were also chronic vesicular myocarditis, fibrinous pericarditis, old pleuritis and double hydrothorax with chronic passive congestion of the liver, ascites and arteriosclerosis. The only observation that would throw any light on the ætiology, was a definite disease process in the sympathetic ganglia. Hence the authors advance a fourth probable origin of the disease, that is a nervous origin. Previous writers have suggested exposure, infection and endocrine irregularities as possible explanations.

Pityriasis Rosea of the Scalp.

H. HAXTHAUSEN (*The British Journal of Dermatology and Syphilis*, April, 1927) in an article on *pityriasis rosea* of the scalp asks the question how often does the affection, when it occurs in children, produce an eruption in the scalp. From the perusal of the literature on the subject it would appear to be an unusual occurrence, but the author finds that in all children under fourteen years of age, the scalp was affected. In no case in his series was the scalp of an adult known to be affected. The lesions on the scalp corresponded to those on other parts of the body, with the exception that they were not so hyperæmic. A circinate collar of scales was distinctly recognized.

Dermatolysis.

M. MINAR (*Indian Medical Gazette*, April, 1927) reports a case of dermatolysis in a female, aged twenty-two years. The history was that at birth the patient's left leg was larger than the right. She married at eighteen years of age and towards the end of her pregnancy her leg became painful and began to increase in size. On examination the whole of the muscles and subcutaneous tissues in the affected region hung loosely and in folds. This condition is rare and usually of hereditary tendency. It is slowly progressive and apt to be mistaken for elephantiasis. Small fibromata are often associated with this condition. Excision is the only form of treatment.

The Calcium Content of the Blood Serum in Skin Diseases.

G. H. PERCIVAL AND C. P. STEWART (*The British Journal of Dermatology and Syphilis*, April, 1927), following upon their observations for calcium metabolism in skin diseases, doubt the value of calcium salts in the treatment of these conditions. The serum calcium values obtained by the authors are presented in tabular form. Most of the common skin diseases are dealt with. The method of analysis employed was that of Kramer and Tisdall. The figures recorded are in agreement with those of previous observers and do not reveal any great abnormality of the serum calcium content. In one case of Raynaud's disease and of papulo-necrotic tuberculide and in two cases each of purpura and *lupus erythematosus* the serum calcium was less than nine milligrammes per hundred cubic centimetres of serum. The authors, however, regard this as indicative of severe malnutrition rather than of specific disease. It was further decided to increase the serum calcium content experimentally by the administration of parathyreoid in certain conditions, including Bazin's disease, chronic erythema of the legs, chronic leg ulcer, psoriasis, *acne pustulosa* and *lupus erythematosus*. A definite rise was obtained, but no clinical benefit was observed.

Sugar Tolerance in Dermatosis.

G. G. CAMPBELL AND J. F. BURGESS (*The British Journal of Dermatology and Syphilis*, May, 1927) describe a series of histories which indicate that certain skin lesions are frequently associated with a temporary rise in the blood sugar when they occur in persons who have an intolerance to sugar. These subjects are not diabetics and manifest no abnormality except under special dietetic conditions. There are two separate factors described in this intolerance. The first factor is the inability of the organism to deal with more than a minimum amount of carbohydrate in the diet resulting in a raising of the blood sugar above normal limits. The second factor is that there may or may not be delay in the assimilation of the sugar. The test comprises the feeding of the individual with one hundred grammes of glucose on a fasting stomach and making observations on the blood sugar every half hour. Some of the skin lesions appearing in pregnant women were due to this cause, but the majority occurred in adults over fifty years of age. The type of skin eruption was usually a dermatitis of the eczematous kind, but occasionally it was in the form of an urticaria. In most instances an intractable dermatitis occurred in an individual past middle life who had made no change in his habits or occupation. The groins and axillæ were often attacked and many lesions appeared to be the result of an irritant application. Of thirty-one patients six failed to report, seven manifested considerable improvement before they were lost sight of and the lesions of the remainder all disappeared on a sugar-free diet.

Treatment of Leprosy.

E. MUIR (*Indian Medical Gazette*, April, 1927) in his introductory remarks on the treatment of leprosy, states that although there is no specific cure in the usual sense, there is a line of treatment which will cause the permanent disappearance of all active signs of the disease. He holds that the prognosis in early leprosy is more favourable than in early tuberculosis. The procedure of treatment in Calcutta is (i) the treatment when present of accompanying diseases, (ii) the rectification of the diet, (iii) a gradual increasing exercise, (iv) the use of special drugs, chiefly hydnocarpus oil, (v) external applications and surgical interference when necessary. The author states that the delay in improvement is frequently caused by the failure to treat intercurrent syphilis. He lays great stress on the necessity for providing good food; graduated exercises also have the combined effect of increasing the patient's resistance as well as of counteracting the mental inertia and despair to which these individuals are so prone. As far as drugs are concerned chaulmoogra and hydnocarpus oils stand in the first place. For the purpose of reducing the intermittent leprous reactions several small intravenous injections of potassium antimony tartrate (0·02 to 0·04 gramme) are recommended. The treatment of the actual disease is begun with injections of hydnocarpus oils containing 4% creosote, given by intramuscular or subcutaneous injection. Injections are given twice a week, beginning with four cubic centimetres and rising to ten cubic centimetres. If the latter dose produces no local or focal reactions, a solution of sodium hydnocarpate in a 1% saline solution is given intravenously twice a week, the

quantity varying from two to ten cubic centimetres. If a reaction is produced, the former method is again resorted to. In the second stage of the disease, when there are a considerable number of lepra cells and no high degree of immunity is present, particular care is to be taken by the administration of small doses. In the third stage, when most forms of treatment produce their best results, acute fevers and anything causing protein shock will give beneficial results. For the pain attendant on nerve swellings the intramuscular injection of 0·18 to 0·24 cubic centimetre (three or four minims) of a one in one thousand solution of adrenalin chloride diluted with two cubic centimetres (thirty minims) of normal saline solution, has often a magical effect. Sometimes it is necessary to free the nerve by surgical operation. The treatment should be continued until all active signs have remained absent for from six months to two years, according to the nature of the infection. By active signs is meant the inability to find Hansen's bacillus and the disappearance of all erythema in the macules and of all changes in the lesions.

UROLOGY.

Treatment of Cancer of the Prostate.

G. MARION (*Journal d'Urologie Médicale et Chirurgicale*, May, 1926) discusses the value of the various methods of treating prostatic carcinoma. The treatment varies considerably with the stage of evolution of the neoplasm and with its location. As soon as diffusion of the neoplasm is felt in the periprostatic and perivesicular tissues, ablation is out of the question. Even though diffusion of the neoplasm to such an extent cannot be determined by palpation, cancer cells may already have invaded the lymphatic vessels and even the lymphatic glands. Under these circumstances operation is justifiable, for complete enucleation of the prostate and vesicles in one mass is a valuable palliative measure. One reason for considering the condition inoperable is the occurrence of persistent pains in the back or trunk. These pains probably arise from the pressure on nerves of early vertebral or deep glandular metastases. Unless the cancer commences in periurethral adenomata, symptoms arise only late or not at all and so in actual practice the category of operable cancers of the prostate is unfortunately very limited. If a prostatic carcinoma is regarded as falling within the operable class, ablation is justified, for amelioration is the result in practically all cases and sometimes cure. The author has operated on forty-eight such patients in private practice. As he has not had the opportunity of following the subsequent progress of his public hospital patients, the latter are excluded from the following review. Of the forty-eight patients three died of embolism during convalescence, six relapsed rapidly some months after the operation, eight relapsed several years afterwards, twenty-six died from various causes after one to five years, preserving their urinary function to the last and only fourteen of these twenty-six died from the effect of metastases. Two patients are still alive and in good health, one after four and the other six years. Eight patients have been too recently operated upon to justify any conclusion. Finally, three patients appear to be definitely cured after ten, seven and four and a half years respectively.

Horseshoe Kidney.

J. A. C. COLSTON AND W. W. SCOTT (*Journal of Urology*, 1926) emphasize the importance of preoperative diagnosis of horseshoe kidney. With the aid of pyelography the diagnosis can be made in a large proportion of cases. The renal pelves are seen to be lower and nearer the middle line than is usual. The calyces, instead of pointing outwards, are turned downwards and inwards. With a stereoscopic pyelogram the renal pelves are seen to occupy an anterior rather than the normal posterior position. The anomalous position of the pelvis, the abnormal number and course of the blood vessels and the fixation of the isthmus, greatly modify the operative technique, although the usual lumbar incision is the best.

Preparation for Prostatectomy.

B. A. THOMAS (*Journal of Urology*, January, 1927) describes his routine methods of preparation of patients for prostatectomy. Whenever possible renal decompression is achieved by means of the tied-in catheter. The majority of patients respond to this method of drainage in a week or two. Not infrequently the general damage done by the disease is greater and it may be necessary to use diuretics, urinary antiseptics and cardiac stimulants over many weeks or even months. As diuretics, caffeine-sodiobenzoate or theocin sodium acetate are advised, while digitalis is the most useful cardiac stimulant. For testing the kidneys phenolsulphonephthalein or the indigo-carmine test is used. The excretion of these dyes need not be estimated quantitatively over a given period, but relatively by comparing the depth of tint in successive periods. By this means the so-called "index of elimination" is gauged and the use of a colorimeter is unnecessary. For the phenolsulphonephthalein test all that is necessary is to collect the urine for three equal periods of half an hour each and compare the tints of the alkalinized specimens. With normal kidneys the tint is deeper in the first than in either of the following specimens. Next in importance to the study of the renal efficiency is the determination of the condition of the cardiovascular system. In this regard determination of the blood pressure is important; too low a blood pressure is as dangerous as too high a pressure.

Enuresis in Children.

ARTHUR J. BLAU (*Medical Journal and Record*, October 20, 1926) holds that in enuresis the basic anatomical factor is a vesical atony, particularly of the internal sphincter muscle of the bladder. The underlying factor of this atony cannot be determined with any degree of certainty. The author's observations point, however, to a neurosis, the outcome of an undeveloped or unstable nervous system. This form of enuresis which covers the majority of all cases, may be designated "essential" enuresis in contradistinction to the few in which a definite organic cause can be discovered and removed. The use of pituitrin in essential enuresis has proved of more value than any other therapeutic measure; about 75% of the author's patients were cured or improved by its use. The drug was administered orally in doses of six milligrammes (one-tenth of a grain) three times a day and increased gradually to fifteen milligrammes (one-quarter of a grain) at each dose. The number of patients treated was seventy-five in all and in fifty-four of these the oral administration was supplemented by the hypodermic injection of 0·5 cubic centimetre of pituitrin every three days for three doses.

Effect of Magnesium Sulphate on Phenolsulphonephthalein Elimination.

F. S. CROCKETT (*Journal of Urology*, February, 1927) has noted that the elimination of phenolsulphonephthalein is delayed when magnesium sulphate is being administered by mouth at the same time. He has determined that this delay is not due to the hydrogogue cathartic effect of the salt, but to the presence of absorbed magnesium sulphate in the body fluids. The delay effect continues for three or four hours after the administration of the magnesium salt and the value of the reading may be lowered as much as 70% in some cases. Calcium chloride, given in 0·3 gramme (five grain) doses three times a day, will neutralize the inhibiting effect of the magnesium sulphate on dye elimination, while it has no appreciable influence on the cathartic action of the salt.

Effect of Ether Anæsthesia on Renal Function.

W. H. HAINES AND L. F. MILLIKIN (*Journal of Urology*, February, 1927) have performed experiments on dogs to test the effect of ether anæsthesia on the kidney function and efficiency. The dogs were all healthy and were subjected to deep ether anæsthesia for half an hour before the dye was injected. It may definitely be stated that deep ether anæsthesia lowers both the output of urine and the elimination of dyes. The latter effect is greater with indigo-carmine than with phenolsulphonephthalein. The effect of ether on the kidney is that of a vaso-constrictor. Albuminuria and other renal sequelæ of prolonged ether anæsthesia are probably due to a secondary capillary hyperæmia following the primary vaso-constriction. It is not likely that ether has any direct toxic effect on the renal tissues. In laboratory animals preliminary injection of morphine and atropine prevents ether inhibition of renal function.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at Warragul on June 18, 1927.

AFTERNOON SESSION.

At the afternoon session, which was held at the West Gippsland Hospital, several patients were presented by members of the newly-formed Gippsland Subdivision.

Fractured Pelvis, Extravasation of Urine, Urinary Fistulæ.

DR. GEORGE J. LEY showed a male patient, aged thirty years, who had been admitted to hospital five months previously after a road accident. He had had gonorrhœa many years previously. At the time of his admission he had complained of severe pain in the region of the pelvis, particularly over the ala of the left ilium and had passed bloodstained urine. There had been a large skin wound of the scalp. Movement of the pelvis had caused severe pain, but no deformity had been detected. He had then been unable to pass urine and on catheterization signs of an old stricture in the region of the membranous urethra had been detected. Bronchopneumonia had then developed and he had been very ill. It had still been found necessary to use the catheter. Extravasation of urine had then occurred and three weeks after his injury a fistula had appeared in the right groin and shortly after that in the left groin also. For a time practically all the urine had been passed through the fistulæ.

X ray examination had revealed a fracture of the wing of the left ileum, over which a fluctuant mass, due to osteomyelitis at the site of the fracture, had appeared The mass had been incised and pus evacuated, since when a discharging sinus had persisted. Escape of urine by the fistulæ had gradually ceased and at the time of presentation the urine was being passed *per urethram*, but the general condition of the patient was very bad. Contractures had developed in both lower limbs, the left being adducted and flexed at the hip joint. The left knee jerk was absent and there was some anæsthesia and paralysis of the left leg.

MR. ALAN NEWTON said that the chief problem was how to deal with the urinary fistulæ, the origin of which, whether from the bladder or the urethra, should first be determined. The patient had had a stricture of the urethra which apparently was not a very pronounced one, seeing that it had admitted a Number 8 catheter. He thought that the X rays had probably failed to reveal a fracture of the pubis and that the fistulæ were probably of bladder origin. Injection of dye into the bladder and cystoscopic examination would reveal the origin of the fistulæ. If they were arising from the bladder, he would advise that the latter be drained suprapubically and the fistulæ closed. If they were of urethral origin, they should be dealt with by the perineal route. The sinus over the ilium probably led to a sequestrum, which should be removed. If the patient recovered, the deformity of the left lower limb should be dealt with, either by a subtrochanteric osteotomy or by an athroplasty.

DR. H. FLECKER suggested that the origin of the fistulæ might be easily determined by the injection of "Lipiodol" and subsequent X ray examination.

DR. FAY MACLURE said that fractures of the pelvic bones were very common particularly in "head on" motor accidents. Those sitting on the back seat were especially liable owing to their being suddenly jerked forward at the moment of impact, a counter impulse being transmitted to the pelvis through the femora. He had seen fracture of the pelvis result in this way even although the patient had not left the back seat. It must be remembered that the pelvis was a bony ring and usually fractured in two places, in the region of the pubis and near the sacro-iliac synchondrosis. A fracture near the latter site might explain the anæsthesia of the leg seen in the patient presented. He thought that the fistulæ were probably due to injury of the bladder resulting from a fracture of the pubic bone. If they had been of urethral origin, they would probably have been situated in the perineum. Owing to the presence of large veins near the base of the bladder pyæmia and pulmonary emboli were liable to result from injuries in that region.

Pernicious Anæmia.

Dr. Ley's next patient was a male, aged forty-three years. On his admission to hospital he had been very pale and the blood had contained 2,900,000 red corpuscles per cubic millimetre. A blood film had been examined and had shown features which had been regarded as being typical of pernicious anæmia. He had been given dilute hydrochloric acid up to 2·4 cubic centimetres (forty minims) three times a day and injections of sodium cacodylate every third day for three months. His teeth had been attended to. He had rapidly improved and had remained well since his discharge from hospital five months previously, when the blood had contained 4,500,000 red corpuscles per cubic millimetre. Dr. Ley asked whether the anæmia would recur and several members interjected that they thought it would.

Osteomyelitis of the Tibia.

Dr. Ley also presented a boy, aged eleven years, who had been admitted to hospital five months previously with a high temperature, looking very ill and complaining of pain over the right tibia. The bone had been exposed and it had been found that an osteomyelitis involving practically the whole of the shaft of the tibia was present. A partial diaphysectomy had been performed. After the operation he had for a time been desperately ill and had had a high temperature. Several sequestra had been removed from the upper end of the tibia. Slow recovery had then followed and at the time of the meeting there was a large granulating wound with several sinuses at its upper end which was thought to be fit for a pedicle graft. Good regeneration of bone had taken place.

DR. H. PERN said that in the treatment of chronic osteomyelitis, bone should be freely removed in such a way that a boat-shaped cavity with a flat edge was left. It did not matter how much bone was removed provided a "shell" was left. The periosteum should be loosely sutured, the deep tissues brought down with mattress sutures and a glove drain which should be removed in twenty-four hours, inserted. A firm pad should be placed over the wound. He thought that prolonged drainage in these cases was harmful. In one patient with a chronic osteomyelitis of the radius with two sinuses, requiring removal of one-half to three-quarters of the thickness of the lower two-thirds of the radius, complete healing and full mobility had been obtained in three weeks by the adoption of the above-mentioned method of treatment. In another patient with an acute osteomyelitis of the fibula the wound had rapidly healed, but a small part had broken down. A sequestrum had been removed and complete healing had rapidly followed. In a third patient whose sinuses had been present in the tibia for fourteen years, healing had been obtained in three weeks. He also instanced a case of tuberculous disease of the tibia in which similar treatment had been adopted with good results, although regeneration in tuberculous osteitis was not so rapid as in osteomyelitis.

Poliomyelitis.

DR. DONALD PRYDE showed a male, aged sixteen years. He had always been subject to bilious attacks which had usually lasted about three days. On October 16, 1926, he had what appeared to be one of his customary bilious attacks with considerable vomiting and severe headache. His temperature had been raised and his tongue dirty, but nothing else abnormal had been detected. The vomiting had soon ceased and the headache had lessened in severity. On October 19, 1926, he had fainted and felt rather exhausted. On October 21, 1926, he had felt very tired and drowsy and complained of numbness in the legs and arms. His temperature had been normal. The knee jerks had been absent. The left plantar reflex had been flexor and the right equivocal. On October 23, 1926, the flexor muscles of the arms and legs had been very weak and there had been some loss of power in the extensors. The superficial abdominal reflexes had been absent. Sen-

sation had been unimpaired. He had also complained of difficulty in swallowing and had coughed up a good deal of frothy sputum. On October 25, 1926, his condition had become rapidly worse and he was seen in consultation by Dr. Whitford. No reflexes had been present in the arms and legs, the superficial abdominal reflexes were still absent, swallowing had been very difficult and had caused respiratory spasm and cyanosis. The voice had been nasal and the tongue when protruded had deviated to the right. The pulse rate had been very rapid and there had been tenderness and extreme weakness of the muscles of the limbs and trunk. He had been unable to cough. A diagnosis of poliomyelitis of the Landry type had been made. Nutrient enemata had been given. Dr. Jean Macnamara had seen the patient and had concurred in the diagnosis made. Antipoliomyelitic serum had been given, ten cubic centimetres intrathecally, thirty-five cubic centimetres intravenously and twenty-five cubic centimetres intramuscularly. This had been followed on the two succeeding days by intramuscular injections of twenty cubic centimetres and thirty cubic centimetres. The upper limbs had been placed in a frame in a position of abduction at the shoulder, semiflexion at the elbow and midpronation of the forearm. A plaster mould had been made for the lower limbs in order that his muscles might be placed in a position of complete rest. Six days later the diaphragm had become affected, respiration had been very rapid and shallow and the accessory respiratory muscles had been brought into play. His voice had been a mere whisper. Nutrient enemata were still being administered. On November 8, 1926, the power of swallowing had begun to return and his voice had become stronger. A week later passive movements had been commenced in those muscles which were no longer tender, and in a short time all the affected muscles had been passively exercised once a day. Heliotherapy had been instituted. By the beginning of December he was eating well and gaining weight and had commenced active movements. He had then been taken out of the frame and had commenced active movements, first against gravity and then against gradually increasing resistance. Return of power had gradually taken place, so that at the time of presentation almost every movement could be performed and it appeared probable that he would be able to walk quite well without the aid of any support or correcting apparatus. There had been no soreness of the throat, and no loss of sphincter control at any time during the course of his illness. Dr. Pryde pointed out that in the New Zealand epidemic only two out of two hundred patients who had lost the power of swallowing, had survived and not one who had lost the power for more than fourteen days, whereas the patient presented had lost the power of swallowing for sixteen days.

DR. JEAN MACNAMARA congratulated Dr. Pryde on the good result he had obtained. On the tenth day of the disease the patient had been paralysed in all four limbs, had difficulty in swallowing and in respiration and extreme tachycardia. In the American epidemic of 1916 patients with the degree of involvement seen in Dr. Pryde's patient had not recovered and in the New Zealand epidemic of 1925 survival of only three patients with bulbar paralysis had been reported, but they had not been so extensively paralysed in the limbs. She attributed the recovery of the patient to three causes: (i) The administration of serum. No reaction to the serum similar to that frequently seen when horse serum was injected, had occurred. This had been the experience in the New Zealand epidemic and was probably due to the fact that human serum had been used. (ii) The careful supervision and muscle re-education carried out by Dr. Pryde. (iii) Rest. She considered that recumbency for a period of six months should be insisted on when the muscles of the back and lower limbs are badly affected and the less the amount of walking in the first year, the better the ultimate recovery.

Epilepsy During Pregnancy Associated with a Low Blood Pressure.

DR. A. C. FRASER showed a female patient, aged twenty-six years. For years she had been subject to "turns" at the time of the menstrual periods and since her marriage five years previously *petit mal* had been suspected, but nothing definite had been observed. She had one child, the pregnancy and confinement being quite normal. She had been first seen on April 3, 1926, at about five a.m. Her husband had stated that during the night she had had two "turns" with convulsive movements of the right hand. Later he had wakened up to find her completely comatose. For the week previous to this she had complained of headache which had been attributed to constipation. She had been semicomatose and very irritable. The uterus had extended to the umbilicus. Her last menstrual period had been in September, 1925. Eclampsia had been suspected, but the urine had contained only a faint trace of albumin. The systolic blood pressure had been 70 and the diastolic 50 millimetres of mercury. Eliminative treatment by enemata bowel irrigations and calomel had been instituted to which there had been some response, but just as she had appeared to be improving, she had suddenly looked queer and passed into a trance-like condition and in this automatic actions had been performed for some minutes. She had then suddenly fallen into a deep sleep from which she could with difficulty be aroused. Similar attacks had recurred through the day with intervals of partial clearness. A mixture containing "Luminal" and *nux vomica* had been prescribed. The next morning she had had complete amnesia for the preceding day's events. She had for the first time definitely felt fœtal movements and had begged unceasingly to have the pregnancy terminated. She had been seen in consultation with Dr. Hall and it had been agreed that in the interests of the mother labour should be induced. On April 5, 1926, quinine and castor oil had been given and also "Pituitrin" (six injections of 0·5 cubic centimetre at intervals of an hour). This had had no effect on the uterus, but the systolic blood pressure had risen to 124 millimetres of mercury and she had felt much better. On the two succeeding days the same treatment had been repeated. There had been no effect on the uterus, but the patient had now felt quite well and had been quite willing to continue with the pregnancy. The systolic blood pressure had been 125 millimetres of mercury. Attempts to terminate pregnancy had then been suspended, as it had been thought that the condition might be one of pituitary instability and controllable by injections of "Pituitrin." On April 14, 1926, a skiagram of the base of the skull had shown a normal *sella turcica*. The patient had then been seen in consultation by Drs. Sewell and Fowler and on their advice a Cæsarean section had been performed and the patient sterilized by the excision of a small portion of each tube. On May 28, 1926, she had returned from hospital. The systolic blood pressure had been 122 millimetres of mercury. She had remained well until the morning of June 9, when she had had a *petit mal* attack followed in the afternoon by a severe headache and several fits ending in semicoma. When in this state the systolic blood pressure had been 100 millimetres of mercury. No "Pituitrin" being available, hypodermic injections of 0·6 cubic centimetre (10 minims) of "Ernutin" had been given and ten minutes later the blood pressure had risen to 110, she was becoming more conscious and her headache was easing. During the night she had been given three injections of "Infundin" (one cubic centimetre) at intervals of an hour and the following morning six injections (0·5 cubic centimetre) of the same drug. After the fourth dose the systolic blood pressure had risen to 128 millimetres of mercury and she had been alert and smiling and mentally clear. Two days later she had menstruated. A month later premenstrual symptoms and fits had recurred and she had again been almost unconscious and had again been relieved by injections of "Infundin." Ergotin 0·18 gramme (three grains) had been prescribed to be taken thrice daily for some days before each expected menstrual period and since then the fits, while recurring every month, had been much milder. "Luminal" had been tried, but had not given so much relief as the ergotin. Dr. Fraser pointed out that the relation of the low blood pressure to the seizures and their prompt relief on the administration of ergotin and "Pituitrin" was very interesting. He asked whether the condition was to be regarded as being one of true epilepsy and whether the relationship of the fits to the menstrual cycle had any significance. He invited suggestions as to the treatment by ovarian gland extracts and asked whether in pregnant epileptics labour should be induced and the patient sterilized as a routine procedure. In the

interests of the patient presented termination of pregnancy had seemed to be imperative.

DR. A. V. M. ANDERSON said that as there had apparently been no indications of toxæmia, he would like further information as to why pregnancy had been terminated in this case. He thought that the indications for inducing labour in disease, for example in such a condition as pulmonary tuberculosis, were not so wide as they used to be. He agreed with the dictum of the late Dr. O'Sullivan that one should hesitate before putting an end to the physiological process of pregnancy in order to benefit a pathological condition concurrent with it. Epilepsy was merely a symptom and might be due to a variety of causes.

DR. R. FOWLER said that medicine was still a very inexact science and that ethics was not a science at all, so that in the consideration of induction of labour it was not surprising that there was room for much difference of opinion. In the patient presented three problems had to be decided; first, should pregnancy be terminated; second, should the patient be sterilized; third, the technique of any operative procedures thought necessary. In considering the question of termination he looked to the physician for help. The risk of *status epilepticus*, particularly at the time of labour, the prospect of a psychopathy developing in the mother during the puerperium and the possibility that the child might be epileptic, had decided them in favour of induction. He thought that if the obstetrician were called upon to terminate a pregnancy, he should insist on sterilization, as experience had shown that otherwise he would probably be called upon to repeat the operation at a future date. In considering the question as to how termination of pregnancy could best be achieved, it had to be remembered that drug induction had already failed in this case. Any method of induction through the vagina would not allow of the patient being sterilized. The abdominal route had therefore been chosen. A lower segment Cæsarean section was a little more difficult than the classical operation, but gave better results.

DR. FRANK DAVIES doubted the wisdom of allowing the possibility that the unborn child might be epileptic to weigh when the question of induction of labour was being considered. This was, to him, an entirely new viewpoint.

DR. J. P. MAJOR, while not prepared to criticize the induction of labour in the case under review, was in accord with the remarks of Drs. Anderson and Davies. He thought that in epilepsy heredity was not so pronounced a factor as was generally supposed. The epilepsies were in many instances toxicopathic processes with cerebral manifestations and frequently some metabolic disturbance was a factor. The patient presented had a pulse rate of 132 in the minute which was, he thought, more than could be accounted for by mere nervousness and might indicate the presence of some toxæmia. He thought that *status epilepticus* was definitely due to a toxic process as evidenced by the fatty degeneration of the heart muscle.

DR. S. O. COWEN suggested that ephedrine, a new drug with an action similar to adrenalin and which could be administered by the mouth, might be tried.

DR. A. NORMAN MCARTHUR thought that it was extraneous to criticize the induction of labour, as this could be done only by those in association with the patient. He referred to a patient who had had epileptic attacks which had ceased during pregnancy, and which recurred again after labour. An acutely retroflexed uterus had been corrected and no more seizures had occurred. With regard to endocrine treatment he thought that better results might have been obtained if ovarian and thyreoid extracts had been given along with the "Pituitrin." The difficulty with regard to the "Pituitrin" was that it could not be effectively given by the mouth. He would advise treatment with ephedrine, as suggested by Dr. Cowen, along with thyreoid and ovarian extracts.

DR. A. L. KENNY agreed with Dr. McArthur that only those in charge of a patient could determine the correct form of treatment to be adopted, but that certain basic principles should be observed. The question as to whether it was permissible to terminate life in incurable diseases was a very old one and a study of medical and other literature showed that it had frequently been debated in the past without any decision. He had yet to learn that any medical man could constitute himself an authority between life and death. Society could not exist if this were so. In all civilized states of the present day there was only one body of men empowered to decide as to the right to life of the individual. These men were few in number, they were selected with the greatest care from those most cultured and skilled in the law and with the judicial habit of mind. The men so carefully selected were controlled in their approach to their decisions by laws and ordinances that had been evolved by the experience of time in each country and from the experience of other countries. To such men in such circumstances alone did civilized communities entrust such decisions. If for adult life it had been found necessary to have such safeguards for human life, he maintained that the right to live existed at all periods of life equally. He thought that no tribunal of medical men would accept the view that, because the future of the unborn child appeared to be fraught with danger, pregnancy should be terminated.

Chronic Nephritis.

DR. R. L. ALMOND presented a male, aged forty-nine years. He had had gonorrhœa eighteen years previously and had been a moderately heavy drinker. In January, 1926, he had had a compound fracture of the right humerus. Septic infection had followed and the arm had been amputated. He had been discharged in September, but while still in hospital had noticed some swelling of the trunk, limbs and face, which had been present more or less ever since. When first seen on May 27, 1927, he had been stuporose and œdematous. As far as could be ascertained, he had not voided urine for at least twenty-four hours. For two days after his admission his mental condition had been very poor, he had been extremely violent and had suffered from hallucinations. He had also complained of severe headache, anorexia and failing vision. The urine had contained a large amount of albumin. There had been eighty-five milligrammes of urea per hundred cubic centimetres of blood. The urea concentration test had shown a maximum of 1·5% of urea in the urine. Ophthalmoscopic examination had revealed blurring of the optic discs, retinal hæmorrhages and patches of retinitis. Eliminative treatment had been instituted. Numerous diuretics had been exhibited from time to time, including the following: potassium citrate, "Diuretin," caffein citrate, digitalis, squills, theocin and "Novarsurol." The output of urine could not be increased above 900 cubic centimetres (thirty ounces) and the œdema, although considerably lessened, had not disappeared. Electric baths had been given and a moderate response obtained. The mental condition of the patient had definitely improved. The urine had still contained albumin.

Hæmoptysis.

DR. STEWART MACKY showed a female, aged fifty-two years. During the influenza epidemic she had had a very severe attack of pneumonia. Three years previously she had had an hæmoptysis which had recurred twelve months later. In August, 1926, she had again coughed up blood. She had not lost weight and her general health had not been impaired. The sputum had occasionally been tinged with blood. She had had some slight indigestion and was doubtful as to the occurrence of night sweats. On examination the temperature had been 37·8° C. (100° F.). In the right anterior axillary line at the level of the seventh rib there had been a patch, about five centimetres (two inches) in diameter, over which fine râles could be heard. At the apex of the right lung there had been some doubtful prolongation of the expiratory murmur. A provisional diagnosis of pulmonary tuberculosis had been made. The sputum had been examined, but no tubercle bacilli had been found. A skiagram of the chest had revealed slight increase of the hilum shadows, some enlargement and calcification of the hilus glands and slight dilatation of the main bronchi, especially those passing towards the right base and axilla. There had been no evidence of any parenchymatous tuberculous involvement. Her general health had remained satisfactory and she had increased slightly in weight, but in February, 1927, she had had another hæmoptysis. On depressing the tongue a varicosity of veins on the pharyngeal surface of the tongue had been seen. Laryngoscopic examination had revealed a plexus of varicose veins in the abovementioned region with here and there a globular dilata-

tion, but no actual bleeding point. The epiglottis had been smeared with old blood and the vocal cords had been normal. Dr. Macky asked for an expression of opinion as to the source of the bleeding and as to whether diathermy treatment to the dilated veins might be beneficial.

MR. HAROLD DEW said that diathermy would deal effectively with the dilated veins, but there was a distinct risk of œdema of the glottis supervening. The treatment was made difficult by the fact that it had to be controlled by the laryngeal mirror. If the bleeding became a serious factor, he would, however, advise diathermy treatment.

DR. A. V. M. ANDERSON said that bronchiectasis was a frequent cause of hæmoptysis. In view of the X ray report and the presence at the time of the meeting of post-tussive crepitations at the base of the right lung, he thought that bronchiectasis might well be the cause of the bleeding.

DR. H. FLECKER suggested the injection of "Lipiodol" into the bronchi and subsequent X ray examination in order to determine the extent of the bronchiectasis.

Acute Pancreatitis.

Dr. Macky's next patient was a male, aged fifty-two years. The past history had been uneventful, except that twelve months previously he had had a sudden attack of severe abdominal pain which had disappeared in twelve hours. In the early hours of the morning he had suddenly been attacked with severe agonizing pain in the epigastrium and had vomited. He had been seen at 11 a.m., when he was still complaining of severe pain and was collapsed and cyanosed. The temperature had been subnormal and the pulse small and thready, the rate being sixty in the minute. There had been definite tenderness and board-like rigidity in the epigastrium and the abdominal wall did not move with respiration. There had been no dulness in the flanks. On the addition of iodine to the urine a faint green ring had appeared. A provisional diagnosis of perforated ulcer or acute pancreatitis had been made. The abdomen had been opened by a right paramedian incision. No free fluid had been present. The gastro-colic omentum had been œdematous. The gall bladder which had contained stones, had been small, white, opaque and buried in old adhesions and these had also closed the foramen of Winslow. No ulcer of the stomach or duodenum had been found. The lesser peritoneal sac which had been opened by tearing through the gastro-colic omentum, had contained blood-stained fluid. There had been no patches of fat necrosis. The tail of the pancreas had been hard and nodular and the head while not so hard, had been firmer than normal. The gall stones had been removed and the gall bladder and the lesser peritoneal cavity drained. Convalescence had been uneventful until the fourteenth day after operation, when the wound had burst open. It had now healed, but a slight ventral hernia was present.

MR. ALAN NEWTON said that Dr. Macky's patient illustrated the fact that the most reliable diagnostic sign in acute pancreatitis was cyanosis. In this disease he thought that the gall bladder should be drained, whether stones were present or not. If the ventral hernia needed operation, the gall bladder should be removed at the same time.

Scrotal Cellulitis.

Dr. Macky also presented a male patient, who three days before his admission to hospital had noticed a small pustule on the scrotum. He had then become feverish and had noticed severe pain in the scrotum. On admission he had looked very ill. The temperature had been 40·4° C. (104·8° F.) and the pulse rate 140 in the minute. There had been cellulitis and œdema of the whole scrotum except for about five centimetres (two inches) of skin anteriorly. Six days after admission free linear incisions had been made into the scrotal tissues and in the following twelve hours he had had two rigors. The temperature had been 40·8° C. (105·4° F.) and the pulse rate 170 in the minute. Fluids had been well taken for twenty-four hours and had then been refused. Ninety cubic centimetres of antistreptococcal serum had been given and saline solution had been administered by the rectal and subcutaneous routes. For several days he had had a swinging temperature and nearly the whole of the scrotal skin had sloughed. Ten days after the administration of the serum, joint effusions and a scarlatiniform rash had developed. Dr. Macky asked for suggestions as to the best method of providing a skin covering for the testes.

MR. HAROLD DEW said that severe scrotal cellulitis was common in the natives of Egypt, owing to their sitting out in the cold at night. Because of their free blood supply the testes did not usually become gangrenous. If treated by small incisions, hot baths and foments they usually did well. If opened too widely, spreading into the surrounding tissues was liable to take place. In the patient presented he thought that the testes should be covered by a skin graft.

Labyrinthitis.

Dr. Macky's last patient was a female, aged about thirty years. As a child she had had fits and ever since the age of six had had a discharging ear. In 1918 a mastoid operation had been done, but she still had pain in and discharge from the ear. In August, 1926, he had performed a radical mastoid operation and in two months time the ear had been dry and the wound well epithelialized. About three weeks later she had begun to complain of giddiness and headache which had since improved somewhat, but had not disappeared. The giddiness had later occurred only when she had turned on to her right side. Drs. Ewing and Blaubaum had seen the patient and as a result of a complete examination of the ear had reported a dead labyrinth and complete deafness on the affected side.

Hodgkin's Disease.

DR. R. S. WHITFORD presented a male patient, aged forty-three years. In March, 1920, he had consulted Dr. Dunhill because of enlarged glands on the right side of the neck which had been present for several months. Microscopical examination of an excised gland had been done by Dr. C. H. Mollison, who had reported lymphomatous changes. Three X ray treatments had been given and the glands had disappeared. He had remained well for two years and then the glands on the left side of the neck, both groins and axillæ had become enlarged, but had rapidly disappeared under treatment by X rays and arsenic. In 1922 three injections of "Novarsenobenzol" had been given and for the following twelve months he had not felt thoroughly fit, although he had been able to do his work. He had then developed considerable shortness of breath and screening of the chest had shown a large mass extending into the left chest from the mediastinum. Half a litre of fluid had been aspirated from the left pleural cavity. Deep X ray therapy had been applied to the chest which a month later had been apparently clear when examined by X rays. Ever since this time, May, 1924, he had been having X ray treatment at intervals varying up to six months, whenever any glands became palpable in the neck, axillæ or groins and a rapid disappearance of the swellings had always resulted. Dr. Whitford exhibited two very interesting skiagrams illustrating the complete disappearance of the mediastinal mass after X ray therapy.

Tuberculosis of the Shoulder Joint.

Dr. Whitford also presented a male patient with long standing tuberculous disease of the shoulder joint. A discharging sinus was present and a skiagram which was exhibited, showed considerable bony erosion. The joint had become fixed in a position of adduction. He asked for an expression of opinion as to whether an excision of the joint should be done or conservative treatment adopted.

DR. JOHN KENNEDY thought that the condition was tuberculous with a mixed infection superadded. Ankylosis in a bad position had taken place and he advised that the joint be excised.

Self-Inflicted Wound of the Neck.

Dr. Whitford's last patient was a male with a self-inflicted wound in the region of the hyoid bone which had extended into the pharynx. There had resulted a large discharging fistula which had not healed. He asked for suggestions as to treatment.

MR. ALAN NEWTON thought that a "double flap" operation should be done, one flap being cut and the skin turned inwards and another with the skin outwards.

Bunion.

DR. G. A. HAGENAUER showed two patients illustrating the good results obtained by his method of operation for bunion. This has already been described in a recent issue of this journal.

EVENING SESSION.

The evening session was held in the Shire Hall, Warragul, DR. J. NEWMAN MORRIS, the President, in the chair.

Death of Dr. R. J. Bull.

DR. J. NEWMAN MORRIS referred to the death of the late President, Dr. R. J. Bull. Dr. Bull had been a very keen worker in the interests of the association and his loss was deeply felt and regretted by all members of the profession.

The Gippsland Subdivision.

Dr. Morris thought that the time was ripe for the formation of a Gippsland Subdivision.

DR. GEORGE J. LEY proposed and DR. G. A. HAGENAUER seconded a motion to the effect that a Gippsland Subdivision be formed. The motion was carried unanimously.

Dr. George J. Ley was then elected President and representative on the Council of the newly formed subdivision and Dr. R. S. Whitford was elected Secretary.

The Surgery of Joints.

DR. H. PERN read a paper entitled: "Common Joint Conditions" (see page 176).

Experiences in Practice.

DR. GEORGE J. LEY read a paper entitled: "Some Things I Have Learned in Surgical Practice" (see page 180).

DR. G. A. HAGENAUER gave a very interesting and amusing talk on some of his early experiences in practice.

DR. A. E. TAYLOR said that there was one omission in Dr. Pern's paper which he felt that the President, Dr. Morris, was more competent to deal with than he. He referred to the placing of the arm in a position of abduction in the treatment of severe injuries to the shoulder joint.

DR. JOHN KENNEDY had derived much pleasure from listening to the papers presented. In his insurance work he had seen a good deal of the after results of traumatic injuries to joints and it was surprising in how many cases full recovery was delayed for months or years. Owing to incorrect treatment injuries to the internal lateral ligament of the ankle joint were frequently followed by a 50% loss of efficiency, chiefly due to the development of flat foot. Injuries to the internal lateral ligament of the knee joint, if well treated, responded readily, but if neglected led to considerable disability.

DR. FAY MACLURE said that he had never before listened to a paper in which the principles of treatment of joint injuries had been so clearly put. He wished to support Dr. Pern's statement, that in the chronic painful joint the greatest benefit was derived from "hobbling" the joint, in other words, by limiting the movements within a few degrees of full extension and flexion.

DR. NEWMAN MORRIS congratulated Dr. Pern on his paper, but he could not agree with him that surgeons thought only anatomically. They thought functionally as well. Dr. Pern's exposition of the principles of treatment in joint injuries was very sound, particularly with regard to stiffness from prolonged immobilization. When a joint was immobilized, the muscles should be placed in a position of rest. In injuries to the shoulder joint the arm should be placed in a position of abduction, as otherwise the arm if hanging by the side would pull on the deltoid which easily lost its function. He had been impressed with the results of Dr. Pern's treatment of rheumatoid arthritis.

DR. PERN thanked the meeting sincerely for the way in which his paper had been received. He agreed with Dr. Morris with regard to the position of the arm in severe injuries to the shoulder joint. He (Dr. Pern) had been referring only to minor injuries.

A MEETING OF THE SECTION OF OTO-RHINO-LARYNGOLOGY OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION in conjunction with the OPHTHALMOLOGICAL SOCIETY was held in the B.M.A. Buildings, Elizabeth Street, Sydney, on Tuesday, April 26, at 8 p.m. DR. R. H. JONES, President of the Ophthalmological Society, occupied the chair.

Rhinology and Ophthalmology.

DR. R. GRANVILLE WADDY read a paper entitled: "Borderline Cases in Rhinology and Ophthalmology" (see page 185). The paper was illustrated by lantern slides.

DR. ANDREW BRADY thanked the speakers for their papers. He thought that the most common cause of headache was intranasal conditions. This had been the result of his experience which made him doubt the necessity of immediately consulting an optician.

When intranasal pressure was the cause he packed the nose with gauze soaked in 0·6 to 1·0 cubic centimetre (ten to fifteen minims) of a 5% solution of cocaine. When the nose was obviously responsible the condition was easy to remedy. Dr. Brady instanced a female patient who had been blind in the left eye. She had complained of severe headaches. Examination had disclosed the left sphenoid sinus to be suppurating. After cutting the anterior wall of the sinus and draining considerable improvement had occurred in the eye condition.

Acute cyclitis was in most instances a reflex condition and would clear up under intranasal treatment. Many eye conditions could be traced to an affection, such as hay fever and would respond to nasal treatment.

DR. A. H. RUTHERFORD in commenting on the frequency of eye conditions being caused by nasal trouble, mentioned the case of a male, aged thirty-six years, who had come to him with acute irido-cyclitis. Atropine had been exhibited, but with no good result. The patient had been sent to a dentist who found the teeth clean and the radiographer's report of his X ray examination had precluded apical disease. The condition had gradually subsided and was not particularly evident on August 16, 1926. On November 20 there had been a return of the irido-cyclitis. He had been at a loss to account for it. The patient had been referred to a throat specialist. Examination had had shown the patient's throat to be inflamed, the right tonsil to be enlarged and an acute rhinitis to be present. The irido-cyclitis had cleared up after treatment of the acute rhinitis.

DR. CEDRIC COHEN spoke of those patients, especially young people, complaining of headaches, who had normal vision and only a minute error of refraction (not astigmatic). He could not satisfy himself that in a large majority of these the headache was due to the very small error. With this end in view all these patients met with at the Sydney Hospital Out-patient Department were being submitted by him direct to a rhinologist for examination and in a very large percentage there was present much congestion of the nasal passages. On treatment the symptoms disappeared and it was not necessary to order the correction. It was interesting to hear Dr. Waddy's figures regarding the causes of retrobulbar neuritis. He had lately seen a young girl with this condition. After the antra had been opened and drained (pus had been present) her vision had recovered rapidly. Whether it was a case of *post hoc* or *propter hoc* he was not prepared to say.

DR. R. H. JONES, the Chairman, stated that it had been extremely interesting to hear the different views of members on the subject and discussion. Such a thing as retrobulbar neuritis alone gave rise to great controversy and the diversity of opinion had been demonstrated by the different views taken by members that evening. He thanked members for the large and enthusiastic attendance.

DR. HERBERT MARKS agreed with Dr. Brady that it was not easy to diagnose the cause of many eye affections. It was not uncommon, however, to find that many headaches were the result not of eye, but of nasal conditions. Pressure symptoms from obvious abnormalities within the

nose were not difficult to deal with, but the cause of an optic neuritis or retrobulbar neuritis which were serious to the patient, was not always easy to determine.

In the case of a patient referred to the rhinologist, with optic neuritis or retrobulbar neuritis showing no obvious signs or symptoms referable to a definite sinusitis, there would be a doubt as to what course to adopt. In such a case he would feel justified in exploring the posterior ethmoidal cells and the sphenoidal sinus. By such a procedure the surgeon would very often meet with a latent collection of pus or polypi in the posterior ethmoidal cells or perhaps a latent sphenoidal sinusitis and the eye condition would clear up in a very few weeks.

DR. R. S. GODSALL considered that some patients suffered from extremely distressing headaches which ophthalmic surgeons could not releive and for which glasses *et cetera* were no good. Nothing could be found. He thought that this condition was due to the swelling of the septum in front of and underlying the mid turbinate, causing pressure between the septum and middle turbinate. This region often became swollen at night and caused pressure with subsequent morning headaches and neuralgia.

He had used 10%packing of the nose to relieve headache. For years he had done cauterization with success.

With regard to acute conjunctivitis—pink eye—he felt that the condition was not one for the ophthalmologist, but for the rhinologist. He had known cocainization and cauterization to relieve this condition. He could offer no explanation of this, but his experience had shown that the condition responded to such treatment.

He referred to blockage of the lower part of the tear duct when examination revealed nothing in the nose. Cocainization of the entrance to the tear duct followed by cauterization or submucous resection of the inferior turbinal ventilated that portion and relieved the condition.

DR. H. SEAWARD MARSH remarked on the rarity of eye conditions due to antrum disease. He had seen two patients, both adolescents, with chronic condition of the antrum in whom the eyeball was pushed out of position. Of suppurative and non-suppurative ethmoiditis he thought that the former had more effect on the eye than the latter. Complete exenteration was to his mind the only cure.

DR. C. A. VERGE said that according to Hayehn a large percentage of cases of optic neuritis were due to disseminated sclerosis, a smaller percentage could be traced to syphilis and a very small percentage were the result of sinus trouble. He agreed with Dr. Godsall that for patients with headache and congestion in the eyes when rhinitis was present cauterization resulted in improvement. He referred to a case in which as the result of tonsillectomy not only was the hearing improved, but also the eyesight.

DR. RICHARD FRANCIS considered that normal transillumination and X ray findings could not be relied upon. In this connexion he referred to a patient seen at Sydney Hospital, a female, aged fifty years, with an eye lesion suggestive of a septic focus in the sphenoidal sinus. X ray examination had shown all sinuses to be clear and history and clinical examination had revealed no sinus infection. The patient had later been referred back by the ophthalmic surgeon for exploration of the sphenoidal sinus, as the eye signs strongly indicated sphenoidal mischief. Under cocaine anæsthesia the anterior wall of the right sphenoidal sinus had been exposed. A Watson Williams catheter had been introduced into the sinus and sterile normal saline solution had been syringed in and withdrawn. Pathological examination of this fluid had proved it to be sterile. Nevertheless, the eye condition had cleared up immediately. He had recently read in an American journal of a possible explanation of this state given by Dr. White, namely, that through lack of ventilation the sphenoidal sinus was affected by negative pressure which was relieved when the sinus was opened. Dr. White thought this condition was analogous to that of the vacuum headache in the frontal sinus and even suggested that idiopathic facial paresis might be due to negative pressure in the middle ear cavity.

DR. CHARLES WARREN in thanking Dr. Waddy for his paper to which he had looked forward, said that it bridged the space between the point at which eye conditions finished and nose trouble began.

He agreed with Dr. Godsall that many cases of severe headache were referable to intranasal conditions. When the nose of patients suffering from headache was apparently normal, the headache was probably caused by the antrum. Congestion causing headache could be relieved by cauterization. The results were extraordinary. It was his opinion that any diseased condition of the antrum must affect the eye. Dr. Andrew Brady had been the first to point out and appreciate the importance of examining the nasopharynx in all cases of suspected antral disease. A flow of pus over either choanal was strongly suspicious of pus in the antrum. He referred to a recent article in the *Annals of Otology* on the anatomy of the sphenoidal sinus and optic nerve.

DR. WADDY, in reply, said he had hoped to hear somewhat more constructive criticism. So many patients met with, especially those with headache, left the diagnostician in a quandary and unless they could get additional methods of treatment they did not seem to get any further forward.

He appreciated the remarks of Dr. Godsall and Dr. Verge that cauterization of the nasal mucosa gave very beneficial results in a number of cases and he would be prepared to submit patients to that treatment. He would hesitate to send a patient with optic neuritis for puncture and washout of the postethmoidal and sphenoidal sinuses when the usual investigations revealed no abnormal findings, unless matters were getting desperate and it became a question of a last resort.

Medical Societies.

THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA.

A MEETING OF THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA was held at the Adelaide University on May 6, 1927.

The Action of Paraphenylene-Diamine.

DR. L. V. BULL gave an account of some pharmacological experiments with paraphenylene-diamine in the rabbit; 0·2 gramme per kilogram had been injected. One and a half hours later the animal had died with pronounced œdema of the head and exophthalmos. After a preliminary injection of atropine in another rabbit prior to the paraphenylene-diamine injection, death had occurred only after the passage of seven hours. The œdema had been more pronounced. Adrenalin had no effect on the duration of life after injection. The occurrence of swelled head in merino rams in the autumn months had led to the carrying out of this experiment, which was a repetition of some work previously done in Germany and America.

It was very suggestive that the œdema produced by paraphenylene-diamine should be distributed in the same way as in swelled head in rams. Wethers and ewes were not affected by swelled head. So far as was known, food was not an ætiological factor. Photo-sensitization had been put forward as a cause, but the occurrence of swelled head in a Suffolk (dark-headed ram) negatived this idea in the opinion of Dr. Bull.

DR. C. S. HICKS suggested that the analogy with the paraphenylene-diamine injection pointed to a possible hypersensitiveness upon the part of rams to some chemical product from some particular plant which might be potent and yet only a rare occurrence in the pasture and hence previously overlooked.

A lengthy discussion on anaphylaxis and sensitization followed.

Obituary.

JAMES BOOTH CLARKSON.

IT seldom falls to the lot of one man to be in turn a sailor, a soldier and a medical practitioner and to achieve success in each undertaking. Dr. James Booth Clarkson whose death was recorded in our issue of July 30, 1927, had this distinction. He was born in Lancashire, England, seventy-two years ago. He intended to join the British Navy, but after qualifying for entrance, he found to his dismay that he had just passed the age limit and

perforce was rejected. He then entered the merchant service as an apprentice on the ship *Norfolk* and rose to the rank of third officer. His love for the sea was soon satisfied and he determined to become a soldier. In the intervals between soldiering he found time to study medicine in Edinburgh and in 1881 gained the diploma of Licentiate of the Royal College of Physicians and Surgeons of that city. He yielded to the spirit of adventure at the time of the Spanish American war and served as medical officer to the Sixth Massachusetts Regiment. At the time of the outbreak of the Boer War he was in command of the Fourth Battalion of the Middlesex Regiment at Woolwich and proceeded on active service with his unit. Staff medical officers at the time were scarce and he was appointed Principal Medical Officer in the district between Stormberg and Queenstown. After the Boer War he entered the Government service in Natal and served in several departments. During this time he had experience of three outbreaks of smallpox and was in charge of a plague detention camp on the Transvaal border. Later on he returned to England and secured the Diploma of Public Health at the University of Cambridge. He then returned to Natal and acted as Regimental Medical Officer at the time of the native rebellion in Zululand and Natal.

It was at this stage of his career that James Booth Clarkson came to Australia. He started practice at Ayr, Queensland, but his interest in military affairs did not wane. He received a commission in the Australian Army Medical Corps. At Ayr he became Government Medical Officer and in 1911 he entered the State Medical Service being appointed health officer to the Townsville area. He resigned from the Government service, but entered it again in 1918. For nearly twelve months he acted as Deputy Commissioner of Public Health. In March, 1919, he was appointed Medical Superintendent to the Benevolent Institution at Dunwich and held this post until the time of his death. He died as he would have wished, in harness, after a life of usefulness, devoted to the service of his fellow creatures.

GEORGE McINTYRE MAGGS.

WE regret to announce the death of Dr. George McIntyre Maggs, which occurred at Fairfield Hospital, Victoria, on July 27, 1927.

Naval and Military.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Numbers 67, 69, 71 and 73, of June 16, 23, 30 and July 7, 1927.

AUSTRALIAN MILITARY FORCES.

First Military District.

Australian Army Medical Corps.

The provisional appointment of Captain O. E. J. Murphy is terminated, 30th April, 1927.

To be Captain (provisionally).—Honorary Captain O. E. J. Murphy, from the Australian Army Medical Corps Reserve, 1st May, 1927.

Captain N. M. Gutteridge is appointed to command the 1st Cavalry Field Ambulance, 1st July, 1927, *vice* Captain A. D. McKenzie, who relinquishes the command on 30th June, 1927; the resignation of Captain A. D. McKenzie of his commission is accepted, 30th June, 1927.

Honorary Captain G. H. Brandis is appointed from the Australian Army Medical Corps Reserve, 3rd Military District, and to be Captain (provisionally), 17th February, 1927.

Australian Army Medical Corps Reserve.

Captain W. G. Oakeley and Honorary Captain D. E. Trumpy are transferred from the Australian Army Medical Corps Reserve, 3rd Military District, 1st June, 1927.

Second Military District.

Australian Army Medical Corps.

To be Captain (provisionally) supernumerary to the establishment pending absorption—John Hughes, 26th May, 1927.

To be Lieutenant (provisionally) supernumerary to the establishment pending absorption—Kenneth Charles Trineman Rawle, 26th May, 1927.

Captain A. G. Brydon is transferred to the Australian Army Medical Corps Reserve, 26th May, 1927.

The appointment of Major A. C. Arnold to command the 1st Field Ambulance is extended for a period of one year from 1st July, 1927.

Captain J. S. F. Barnet is appointed from the Australian Army Medical Corps Reserve, 16th June, 1927.

Lieutenant-Colonel J. S. Purdy, D.S.O., V.D., is transferred to the Australian Army Medical Corps Reserve, 23rd June, 1927.

Australian Army Medical Corps Reserve.

Captain C. R. Wiburd is transferred from the Australian Army Medical Corps Reserve, 4th Military District, 26th May, 1927.

Honorary Major R. H. Jones and Honorary Captain D. H. Graham are retired, 6th June, 1927, and 20th June, 1927, respectively.

Third Military District.

Australian Army Medical Corps.

The provisional appointment of Lieutenant E. A. Daley is confirmed.

Captain (provisionally) G. H. Brandis is transferred to the Australian Army Medical Corps Reserve, and to be Honorary Captain, 22nd August, 1922. (This cancels the notification respecting this officer which appeared in Executive Minute, No. 234/1922, promulgated in *Commonwealth Gazette*, No. 70, of 7th September, 1922.)

Australian Army Medical Corps Reserve.

To be Honorary Captain—William Alexander Hamilton Birrell, 1st June, 1927.

Major F. T. Wheatland is transferred from the Australian Army Medical Corps Reserve, 1st Military District, 1st June, 1927.

Major G. S. Robinson, M.C., Captain O. A. Field and Honorary Captain E. Rosanove are transferred from the Australian Army Medical Corps Reserve, 2nd Military District, 1st June, 1927.

Major D. J. W. Browne is placed upon the Retired List, with permission to retain his rank and wear the prescribed uniform, 1st June, 1927.

Honorary Major R. J. A. Berry is retired, 30th May, 1927.

Unattached List.

Major J. Dale, O.B.E., is transferred from the Australian Army Medical Corps, 5th Military District, 12th May, 1927.

Fourth Military District.

Unattached List.

Lieutenant-Colonels H. H. E. Russell, O.B.E., V.D., and A. R. Clayton, D.S.O., are transferred to the Australian Army Medical Corps Reserve, 1st July, 1927.

Captain K. N. Steele is transferred to the Australian Army Medical Corps Reserve, and to be Major, 1st July, 1927.

Fifth Military District.

District Base: Staff.

Major J. Dale, O.B.E., relinquishes the appointment of Assistant Director of Hygiene, District Base Headquarters, 11th May, 1927.

Australian Army Medical Corps Reserve.

To be Honorary Captain—Alan John Macdonald, 25th May, 1927.

Sixth Military District.

Australian Army Medical Corps.

To be Captain (provisionally)—James Scott Reid, 16th June, 1927.

Correspondence.

QUACKERY.

SIR: "General Practitioner" in his letter published in THE MEDICAL JOURNAL OF AUSTRALIA, June 25, 1927, again draws attention to a matter which should concern our profession in many ways, namely the very free licence allowed to herbalists and charlatans of like ilk in this country. If it were not for the credulity of the general public in many other ways, it would seem a reflection on our profession that these quacks can exist at all, let alone build up huge practices with attendant large incomes. In the lay press whole page advertisements on the following lines appear for the baiting of the gullible:

> Operations are not necessary as tumours, growths, cysts, gall stones, appendicitis, fistula, hip disease and all morbid formations can be cured and dissolved painlessly. Movable and floating kidneys and internal displacements of every kind are cured.

A "prepaid preliminary consultation fee of 20s." is charged and "is altogether distinct and apart from any diagnosis, treatment or medicine whatever," thus indicating a positive caution in conserving a lucrative hold on the clients who having paid this fee naturally want something for their money! How many of us could or would demand our consulting fee in advance? We as a profession know that such claims made by these charlatans are false as well as unjust and this being the case, it behoves us to make representation in the correct quarter for the repression of such malpractice, just as much as we would in the event of any epidemic such as plague, small pox *et cetera*. We must face the criticism that our actions are based on interested motives and by the very honesty of our purpose prove our sincerity. The authorities could not turn a deaf ear to any demand for such a reform, provided the weight of the profession as a whole is behind it. One thing certain is, that if the Federal Council would move in this matter and keep on pushing it until a satisfactory conclusion is reached, they would earn the thanks of us all and confer a great blessing on the general community.

The attitude of which "G.P." makes mention, namely, "Why protect fools from their folly?" surely is opposed to the age-old tradition and teachings of our profession and unworthy of a leader. This particular matter is one which as a matter of public welfare seems to demand far more urgency in its handling than does the proposed College of Surgeons and should, when brought to a successful issue, pave the way for the further invitation of public confidence in the College of Surgeons.

It is high time that our long-promised lay health journal were an established fact.

Yours, etc.,

"HIT."

June 26, 1927.

SIR: "General Practitioner's" letter in today's issue directs attention to what is the really big problem in medical practice in Australia today. There is work and enough for everybody in concentrating on the eradication of herbalists and like charlatans. It seems to me too much attention is devoted to sectional and spasmodic efforts to improve ourselves; meritorious as these undoubtedly are, they never can receive half the reward they may deserve at the hands of the general public, while unqualified practitioners flaunt their occasional accidental cures as tributes to their occult science.

For ourselves, let them amongst us who hold truck with these pests of quackery, be anathema. Believe me, Sir, here is the full-time job for our Association; till it is settled, medical practice in this country must remain on a false and unfavourable basis.

Yours, etc.,

SPECIALIST.

June 25, 1927.

Congress Notes.

TRANSACTIONS OF CONGRESS.

WE regret to have to announce that the first instalment of the Transactions of the Second Session of the Australasian Medical Congress (British Medical Association), Dunedin, 1927, will not appear until August 13, 1927. The matter was ready for the press in time for inclusion with the issue of THE MEDICAL JOURNAL OF AUSTRALIA of July 30, 1927, but it was found to be impossible to carry out the machining of the supplement without interrupting the regular sequence of other scientific publications. Pending the installation of new plant much difficulty is being experienced in coping with the work on hand.

Post-Graduate Work.

MELBOURNE PERMANENT COMMITTEE FOR POST-GRADUATE WORK.

THE MELBOURNE PERMANENT COMMITTEE FOR POST-GRADUATE WORK wishes to announce that Professor Allen Kanavel will deliver an extra lecture at the end of his course on the surgery of goitre. The subjects of the lectures to be delivered by him and by Professor Charles Elliot from August 23 to 31, 1927, have been given in our issue of July 23, 1927, on page 139.

Medical Matters in Parliament.

FEDERAL RESEARCH.

IN connexion with the leading article on a Federal research institution we have been asked to publish the wording of the motion which appears on the "Notice of Motion and Order of the Day" paper of the House of Representatives under the name of Mr. J. E. West. It is as follows:

> (1) That the Government set aside an area of twenty square miles of the Federal Capital Territory for the purposes of a research institute, station and farm.
>
> (2) That an endowment of a sum not exceeding £1,000,000 be made, the income therefrom to be devoted to laboratories, field equipment, salaries of a staff of scientific specialists and research scholarships and fellowships open to science graduates of any Australian university.
>
> (3) That an annual Australian research congress be held, also a triennial research congress to which eminent men in biology, chemistry and other fields of scientific research be invited.
>
> (4) That the cooperation of the various State Governments and Universities be sought in perfecting the details of the Australian research institute.
>
> (5) That the State Governments be invited to send their officers engaged in research work, also the Chancellors, Vice-Chancellors, Deans and Professors of the Science Faculties of the several universities, to a convention for the purpose of drawing up, for submission to the Commonwealth Government, a constitution, rules and regulations for the government of the institute.

NOTICE.

THE SIXTH AUSTRALIAN DENTAL CONGRESS will be held at Melbourne from August 22 to 27, 1927, at the Anatomy School in the Melbourne University. A cordial invitation has been extended to members of the Victorian Branch of the British Medical Association to attend any of the clinical demonstrations or any of the meetings at which papers will be read.

Books Received.

REPORTS FROM THE LABORATORY OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH; Edited by Sir Robert William Phillip, M.D., LL.D., and Anderson Gray McKendrick, M.B.; Volume XVI; 1926. Edinburgh: Oliver and Boyd. Imp. 8vo.

DISEASES OF THE SKIN: A MANUAL FOR STUDENTS AND PRACTITIONERS, by Robert W. MacKenna, M.A., M.D., B.Ch. (Edinburgh); Second Edition, Revised and Enlarged; 1927. London: Baillière, Tindall and Cox. Royal 8vo., pp. 462, with illustrations. Price: 25s. net.

HOW TO MAKE THE PERIODIC HEALTH EXAMINATION: A MANUAL OF PROCEDURE, by Eugene Lyman Fisk, M.D., and J. Ramser Crawford, M.D.; Foreword by Major-General Merritte W. Ireland; 1927. New York: The Macmillan Company. Imp. 8vo., pp. 393, with illustrations.

PYELOGRAPHY: ITS HISTORY, TECHNIQUE, USES AND DANGERS, by Alex. E. Roche, M.A., M.D., M.Ch. (Camb.), F.R.C.S. (England), with an Introduction by Sir John Thomson-Walker, O.B.E., M.B., C.M., F.R.C.S.; 1927. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 132, with illustrations. Price: 9s. net.

LECTURES ON INTERNAL MEDICINE (DELIVERED IN THE UNITED STATES, 1926), by Knud Faber; 1927. New York: Paul B. Hoeber Incorporated. Demy 8vo., pp. 157, with illustrations. Price: $3.00 net.

PRACTICAL LECTURES ON THE SPECIALTIES OF MEDICINE AND SURGERY, DELIVERED UNDER THE AUSPICES OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS, BROOKLYN, NEW YORK (SECOND SERIES, 1924-1926); 1927. New York: Paul B. Hoeber Incorporated. Royal 8vo., pp. 610, with illustrations. Price: $7.00 net.

Diary for the Month.

AUG. 9.—Tasmanian Branch, B.M.A.: Branch.
AUG. 9.—New South Wales Branch, B.M.A.: Ethics Committee.
AUG. 10.—Central Northern Medical Association, New South Wales.
AUG. 11.—South Australian Branch, B.M.A.: Council.
AUG. 11.—Victorian Branch, B.M.A.: Council.
AUG. 11.—New South Wales Branch, B.M.A.: Clinical Meeting.
AUG. 12.—Queensland Branch, B.M.A.: Council.
AUG. 15.—New South Wales Branch, B.M.A.: Organization and Science Committee.
AUG. 16.—Tasmanian Branch, B.M.A.: Council.
AUG. 16.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
AUG. 17.—Western Australian Branch, B.M.A.: Branch.
AUG. 18.—Section of Medical Literature and History, New South Wales Branch, B.M.A.
AUG. 23.—New South Wales Branch, B.M.A.: Medical Politics Committee.
AUG. 23.—Illawarra Suburbs Medical Association, New South Wales.
AUG. 24.—Victorian Branch, B.M.A.: Council.
AUG. 25.—New South Wales Branch, B.M.A.: Branch.
AUG. 25.—South Australian Branch, B.M.A.: Branch.
AUG. 26.—Queensland Branch, B.M.A.: Council.

Medical Appointments.

Dr. Norman James Parker (B.M.A.) has been appointed Certifying Medical Practitioner at Numurkah, Victoria, under the provisions of the Workers' Compensation Acts.

* * * *

Dr. Bernard Allen Baker (B.M.A.) has been appointed Public Vaccinator at Clunes, Victoria.

* * * *

Dr. Norman James Parker (B.M.A.) has been appointed Public Vaccinator at Numurkah, Victoria.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx.

ALFRED HOSPITAL, MELBOURNE: Honorary Assistant Surgeons for Diseases of the Ear, Nose and Throat (2), Honorary Assistant Ophthalmic Surgeons (2), Honorary Assistant Dermatologist.

COMMONWEALTH DEPARTMENT OF HEALTH, PORT ADELAIDE: Medical Officer.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

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NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to positions at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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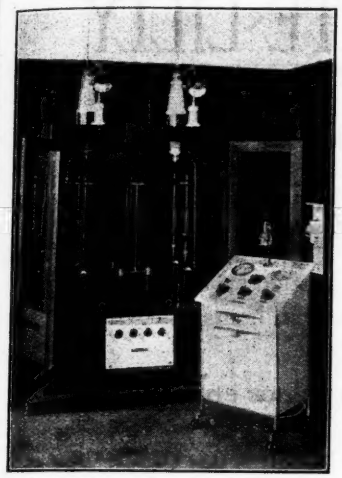

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